THE WORLDWIDE MAGAZINE FOR ALL AMIGA USERS

A WARM WELCOME TO CU AMIGA readers

AMIGA FORMAT

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Month **In View**

The future is here, but what does it look like? **Nick Veitch** disregards crystal balls and gets to the facts…

The future will be here soon. Apparently. But what will it be like? And more importantly, where will the Amiga fit in? Following up on Amiga Inc.'s continual use of the buzzphrase "Digital Convergence", we've decided to investigate exactly what that means, not in terms of what we can imagine the future to be like, but in terms of the coming together of emergent technologies which exist now. In other words, we haven't made it up. We've even enlisted Fleecy Moss, one of Amiga Inc.'s gurus, to give us his own personal impression of these technologies.

With BT making supersurfing at speeds of 64k possible for the home user (see the main news story this issue), now might be the time for you decide to get online, and maybe investigate the weird Tower of Babel which is Internet Relay Chat. If so, you've come to the right place, as we reveal the pros and cons on page 20.

As you probably know by now, our one time rivals, *CU Amiga*, have published their final issue. While we were obviously professional rivals, we were actually on very friendly terms. I would just like to stress that the closure of that magazine does not mean that we will soon be shutting up shop too.

The reasons why *CU Amiga* had to close are varied, and are discussed more in the Mailbag section this month. I would like to categorically state that *AF* is a financially healthy magazine and we intend to continue publishing it for as long as people want to advertise products and read about their computer, so please don't worry.

I am also pleased to say that from this month our writing team will be boosted by freelance contributions from Tony Horgan and Andrew Korn. I hope you'll do your best to make them both feel very welcome



Nick Veitch
Editor



DIGITAL CONVERGENCE PAGE 14
Amiga Inc. claim to be creating a digital convergence product. We investigate what this means in terms of real hardware, with the help of Fleecy Moss.



INTERNET RELAY CHAT PAGE 20
Talk to people you hardly know in the confusing cacophony of IRC. Or is it, in fact, a lot simpler and more pleasant than that?



SIXTH SENSE INVESTIGATIONS PAGE 28
Amnesiac Ghosts, mad professors, embezzling rats, lovesick rabbits, evil robots, a giant cheese and a funny pool table. Well, you can't say it's dull.



CYBERSTORM III PAGE 52
Simon Goodwin finally gets to grips with what promises to be the fastest ever non-PPC-based accelerator – find out how it compares to the others.

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AF COVER STORY

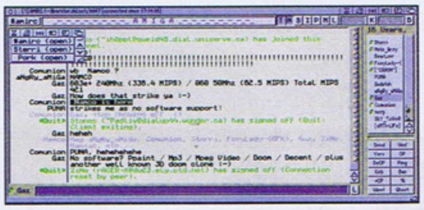
AF CD-ROMS



AF COVERDISKS







Some people chatting through an Amiga, yesterday.

AF SCREENPLAY









(Clockwise from top left) – Talking rats, psychotic X-Men, hundreds of little chaps fighting it out and educational fun for kids, all in this month's ScreenPlay.

WHAT'S UP?

ISDN for Amiga
The ISDN standard will finally come to Amiga users, thanks to a new scheme.

Workbench 3.5
All the latest news and speculation.

Cologne Inventions
A guide to the new hardware that will be showcased at the Cologne 98 show.



WORLD NEWS

Amiga on the Highway

ISDN Internet access will soon be available to Amiga users, thanks to a new scheme from BT and new terminal adaptors from Active.

Although Amiga owners have kept up with modem developments, having 56K modems, voice modems and the like, ISDN has eluded many Amigans so far, mainly because getting ISDN is an expensive business and you need a serial port better than the Amiga can offer to take advantage of it.

However, things are set to change with BT's new Home Highway scheme and Active's ISDN terminal adaptors. BT's HomeHighway is an attempt to cash in on the surge in popularity of the Internet, even in this country where local calls aren't fixed rate or free.

The idea is that it's a low-cost (for BT) ISDN solution. Instead of the hundreds of pounds you could expect to pay for ISDN, the new solution works out at the same price for installation as a second phone line. Although rental costs are about £40 per month, you get £15-worth of calls included, bringing the total cost to only £25 per month.

This is still three times higher than your normal phone line (except that you'll have two lines so it's only 1.5 times the cost), but there are additional advantages to getting ISDN, such as:

> "ISDN has eluded many Amigans so far, mainly because getting ISDN is an expensive business..."



New hardware will soon give Amiga owners the chance to connect to the Internet using ISDN.

- Full 64K access. Not 33.6K or 56K, but a full 64K both ways. This equates to more than 6000cps, meaning that not only is web browsing faster, uploading your website to your ISP should be too.
- Almost instant connection. Unlike modems, which spend a certain amount of time handshaking and getting connection rates and the like, ISDN, being digital all the way through, connects as soon as the phone is answered at the ISP end.

Compared to the 20-30 seconds it takes to connect using a modem (time which you pay for, obviously), the half to one second connection time for ISDN is a definite benefit.

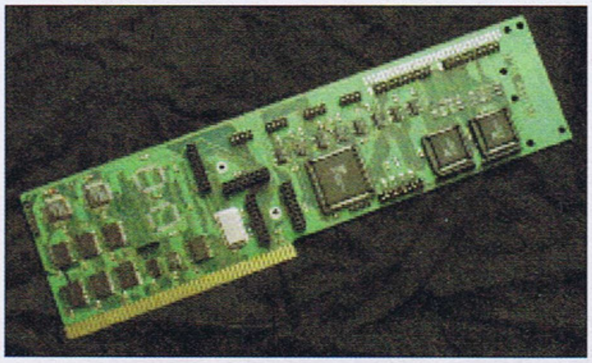
- No premium rates for ISPs. This isn't 100% true as some ISPs don't support ISDN, or want to charge extra money if you are to use it. However, lots of the big names in the UK ISP world are quite happy to let you log on to their special ISDN numbers at exactly the same cost as for modems.
- Two phone lines. Instead of fitting your HomeHighway as an extra line, you can convert your existing line to become ISDN. You still end up with two channels, one that can be used for your phone, one for your Terminal Adaptor.
- Long term cheapness. If you're the sort of person who spends a lot of time online, uploading or downloading, your phone costs will probably be higher when compared to equivalent amounts of downloading using ISDN because it has much faster transfer times.

Despite all these benefits, ISDN isn't for everyone. Your Amiga will need to have a high speed serial port to be able to use it – the Amiga's standard 57,600-capable serial port just doesn't cut the mustard. However, in addition to selling a range of Terminal Adaptors, Active Technologies have informed us that they will also be stocking a new Zorro II multi-I/O board called the IObelix. The board will come in a variety of configurations and will only cost £89.95 for a basic model which incorporates two serial ports and one EPP/ECP bi-directional parallel port.

The board is also supposed to have a modular construction, allowing a low-cost SANA-II Ethernet port to be added at a later date. This makes this multi I/O card a bit of a communications wizard, just from the specs alone.

If you're still a little confused by all this info, look out for our definitive ISDN feature next issue where we'll compare current TAs, I/O cards and BT's new HomeHighway service.

If you just can't wait, you can call BT's HomeHighway service on 0800 222 444, and Active Technologies on 01325 460116. Their websites can be found at http://www.homehighway.bt.com and http://www.active-net.co.uk/ respectively.

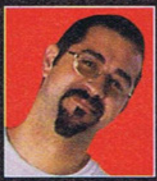


Talking heads

What have the Amiga Format staff been doing this month?



Nick Veitch
Editor
I've been reading *Washing the Spears*, which is a great book about the rise and fall of the Zulu nation. I did go to see *X-Files: Fight the Future*, but I don't want to talk about that.



Ben Vost
Dep. Editor
Well, I've seen films, bought new music, read books, managed to completely avoid the new football season (but not the rain) and practised my German in training for the Cologne show.



Mark Wheatley
Prod. Editor
I've been watching far too many episodes of *The Simpsons*, listening to *Belle & Sebastian*'s ace new album and inflicting pain on a hapless guitar that really didn't deserve it.



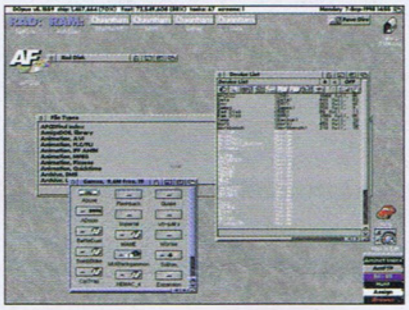
Colin Nightingale
Art Editor
I've just finished a book on ancient man called *We Are Not The First* and was amazed to find out that the ancient Greeks had working computers 2000 years ago. I wonder what their magazine was called?

Workbench 3.5 Will it happen?

We've known for some time that there was a possibility of Workbench 3.5 coming along, despite Jeff Schindler's statement to the contrary at WOA this May, coinciding with his statement that Amiga Inc. wanted to continue to develop the so-called "Classic" Amiga alongside the new machine. Indeed, last year, certain Amiga developers were contracted to do a feasibility study, including what would and should be included in the next revision of Workbench.

Unfortunately, the current top-secret work being done on Workbench 3.5 doesn't seem overly inspiring, merely a bunch of third party commodities and utilities being merged into a seamless package and a TCP stack (probably *Miami*) to help users get online. This isn't anything truly revolutionary as TCP stacks can be found pretty much anywhere these days, and the add-ons that are expected to be merged into Workbench all work very well with existing setups.

If Workbench 3.5 is just a collection of hacks, will it really make a significant difference?



Where Workbench could really benefit isn't in Workbench itself at all, but rather in the Kickstart ROMs that start it all up. We've all got patch programs to help us over some of the rough bits in Kickstart, from forcing stuff to appear in fast RAM for gfx card users to patches to things to give gadgets proper 1:1 aspect ratios, but there are so many more things that could (and perhaps should) be altered in Kickstart.

This ranges from removing the 4.3Gb limit on hard drives to changing the way icons work so *NewIcons* no longer has to be a hack. However, none of these things are going to be addressed in a software-only update. Even if setpatch was made three times the size it currently is, it still wouldn't fix all the problems. This is especially true of the 4.3Gb problem as you would need to have it in Kickstart to be able to successfully load Setpatch on drives larger than 4.3Gb anyway.

What's more, it doesn't look like some of the stupid things about Workbench are going to be solved. DataTypes will remain essentially the same as they currently are: flawed, dependant on chip RAM and not stream-oriented. Also, scsi.device will remain scsi.device, no matter whether it's driving a SCSI or IDE peripheral, confusing a host of Amiga users.

A lot of the talk about Workbench 3.5 is speculation. It's supposed to be unveiled at the Computer 98 show in Cologne this year, so you'll be able to get your first glance at it there. It is likely to go on sale in January 99.

AFB IS GO!

Our announce-only mailing list, launched a couple of months ago, has been a big success. However, it's very labour-intensive here and it isn't very informative for people who want more information or who want to subscribe. As a result, we've moved it onto a dedicated mailing list server program called Majordomo . People who are used to mailing lists should be familiar with this already.

For those who missed the issue where we announced the test version, the *Amiga Format* Bulletin is an announce-only mailing list that gives you the low-down on what's happening in the Amiga world and in *Amiga Format* at least once every four weeks. Each issue will contain news of what will be in the forthcoming edition of the magazine at least a week before it goes on sale, and it will also have quizzes, surveys and competitions.

There'll also be the chance for your voice to be heard in the magazine, like the quotes used in the Internet feature in *AF115*. Your mailbox won't be flooded with mail since you'll only get something from the *AFB* when there's actually news to be had. This might mean extra issues when there's a breaking news story, but other than that you'll get an email every four weeks. From now on, the address you'll need to write to in order to subscribe to the *Amiga Format* Bulletin will be:

af-bulletin-request@futurenet.co.uk with "subscribe af-bulletin" in the body.

If you'd just like to know more, you can send an email to:

af-bulletin-request@futurenet.co.uk with "info af-bulletin" in the body.

Cheap Inkjet Supplies



EMComputergraphic, the people who produce our CD, are launching themselves into the inkjet consumable market with prices for third party ink cartridges designed to please even the most penny-pinching Amigan. The cartridges aren't refilled units; they come straight from the factory, still shrink-wrapped, and start at £5.99. EMC are handling a mixture of inkjet types, from the Canon BJC 4000 range to the Epson Stylus 600 and more. If you would like further information, contact them on (01255) 431389 or visit their website at http://www.emcomp.demon.co.uk

Continued overleaf ➡

DEUTSCHE FABRIK

Solder is splashing in the heart of Europe as German developers put the finishing touches to their latest inventions. Simon Goodwin reports on the goodies promised for Cologne 98.

CHEAPERNET

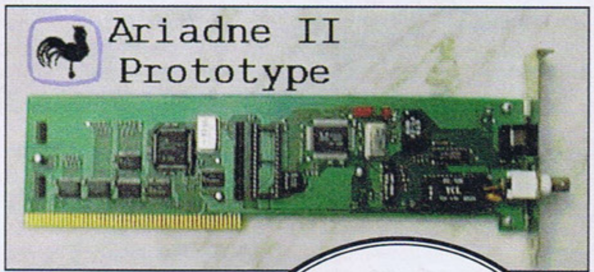
Ariadne 2 is the new Ethernet adaptor from VillageTronic. It's a Zorro 2 card, like the original Ariadne, but it lacks the add-on parallel ports of the old model and comes with new software.

At around £70 (200 DM) it will cost substantially less than any previous custom Amiga Ethernet board.

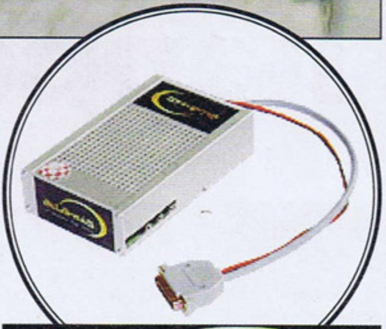
VillageTronic technician Ekkehard Brueggemann told *AF*: "The only thing missing will be the par-port. The software bundle won't be the same. We don't have any official statement to the software point but you'll be amazed, I guess, when everything works like we think..."

ELABORATIONS

Jens Schönfeld's Elaborate Bytes are busy with more than just Buddhism and Catweaselry, though they've added a driver to read 800K and 400K Mac disks to the Amiga Catweasel bundle. Kylwalda is a low-cost add-on for Catweasel and the Amiga floppy port, controlled by Commodore's Paula chip. It allows both disk controllers to share access to a single, standard, high density drive, allowing double-speed HD access through the Catweasel, as well as access to protected boot disks through Paula.



The prototype of VillageTronic's new Ariadne 2 Ethernet card (above).



Atlantis brings MPEG audio to your floppy disk port.

Atlantis plays compressed 18-bit stereo audio files

WEB CONTACTS:
VillageTronic: http://www.villagetronic.com
Elaborate Bytes: http://www.jschoenfeld.com
Albrecht Computer Technik: http://www.act-net.com

The Atlantis MPEG 3 audio expansion card is one step closer to the market. This 'sound card' is a replay-only design which connects to the Amiga's external floppy port – using the disk DMA channel to minimise Amiga processor overhead – or the add-on port on Zorro cards from the same maker. The prototype MPEG 3 routines play in stereo now, but they still crash on some streams.



Elaborate Bytes are working on fixes for the adaptor firmware and intend to have the perfected product on sale for 'under $300' in November.

IDE Express is a plug-in module that takes the strain of IDE disk access off the Amiga processor, emulating Direct Memory Access. It's not quite as fast as Power Computing's Flyer because it uses the 16-bit IDE rather than the 32-bit Kickstart interface, but it's cheaper and easier to fit as there's no need to remove and reposition your system ROMs.

KickFlash is a reprogrammable

PageStream News

Despite suffering setbacks because of faulty phone systems and bad backups, SoftLogik have been concentrating on improving the Amiga's best DTP package and version 4 of *PageStream* should be released before the end of the year.

SoftLogik originally intended to release a new interim version (3.3b) but as time progressed and plans for version 4 became more concrete, along with the need to get a Windows version out, it was decided that version 3.4 would be the next Amiga version, to be shortly followed by version 4.

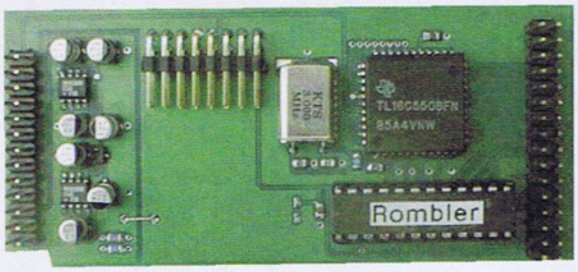
Version 4 will be the first really major update to happen to *PageStream* since the program went multi-platform with the release of version 3, but SoftLogik don't anticipate any of the teething troubles that plagued early versions of 3 for the Amiga. The reason behind this, according to SoftLogik head honcho Deron Kazmeier, is that, "Unlike *PageStream3.0*, we are building upon the core code. *PageStream3.0* was a complete rewrite from the ground up.

"Every line of code was rewritten. On the other hand, *PageStream4.0* is built on top of the *PageStream3* code. We laid a solid foundation in *PageStream3*. We are building on to it."

It will also be one of the first paid for upgrades in quite some time, but the features listed for the new version look promising enough to make the small upgrade fee seem very worthwhile.

SoftLogik have looked at the competition, as well as suggestions from users, and have come up with a list of new features in version 4, including: native indexing; PDF export; defined style tags and variables at chapter level; business card/label printing; HTML text; import/export; layers; drag and drop text; find and replace improvements; trapping; true smallcaps; table of contents generation; figure numbering; definable kerning; pairs; definable tracking; tables; optical alignment/hanging punctuation; edit mask in place; page setup for spreads/range of pages; bookmarks; collect for output; Lasso select.

The new version will cost $75 as an upgrade for existing v3.3 users and $95 for v3.1 users, direct from SoftLogik. At the time of writing we don't know how much it will cost through SoftLogik's UK distributor, EM, but you can contact them on (01908) 370 230.



ACT's Rombler sound card extender.

Kickstart emulator, allowing custom ROMs to boot into other operating systems like *Qdos* or *Unix*.

It sounds ideal for hackers who reckon they can out-code Commodore, and it should sell for under £50 (129 DM).

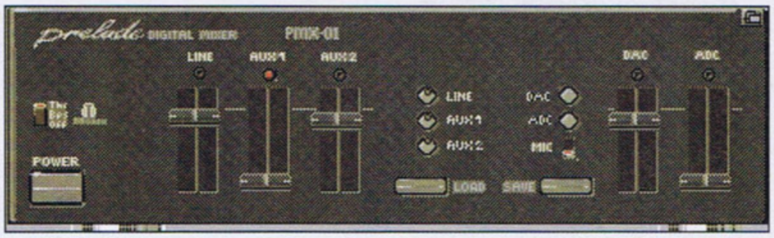
SOUNDINGS

Prelude and *Samplitude* makers, Albrecht Computer Technik, have four new hardware products lined up and some new audio software in the pipeline. *Melting Music* is an AudioCD production package with DAO CD writer support, editing capabilities and a CDDA reader module, all for around £50 (150 DM).

Festiva is a 32-bit Zorro 3 soundcard with six simultaneous inputs and six output channels, capable of playing AC3 surround sound directly. It will be fully expandable, with all signals externally accessible and with a feature bus to allow the use of Prelude extensions. Multiple cards can be used for multi-track working. The target price is 700 DM, under £250.

Festiva and Prelude both support the AHI retargetable audio standard.

The new Catweasel bundle demonstrates Mac DD disk access.



Prelude 1200 boasts the full range of *Prelude* software.

BEYOND PRELUDE

Prelude 1200 is a full implementation of the Prelude Zorro 2 soundcard, redesigned to fit the clock port in an Amiga 1200. ACT are confident that it will be sold for below 300 DM (£100), with a substantial dealer discount. Unlike Prelude, handled exclusively by Blittersoft in the UK, Prelude 1200 will be offered to dealers on a non-exclusive basis and this should allow higher sales and lower prices.

It is fully software compatible with the Zorro version, lacking only ACT's custom feature port, and it comes with all the Prelude software, including AHI drivers, surround sound generator, GUI mixer, tapedeck and Play16.

So far, the Prelude feature bus has been all promise and no action, but the Rombler will change all that. It's a combination MIDI and Wavetable synthesiser interface which plugs into the Zorro version of Prelude. It can play stereo sound directly through PC-type WaveTable cards like Roland's SC55 or Yamaha's DB50XG. The PC sound card plugs onto the Prelude via the Rombler and the whole lot still occupies just one Zorro slot. The price will be below 100 DM (£35), not including the cable for external equipment. The Rombler requires a standard PC 15-pin Gameport/MIDI adaptor.

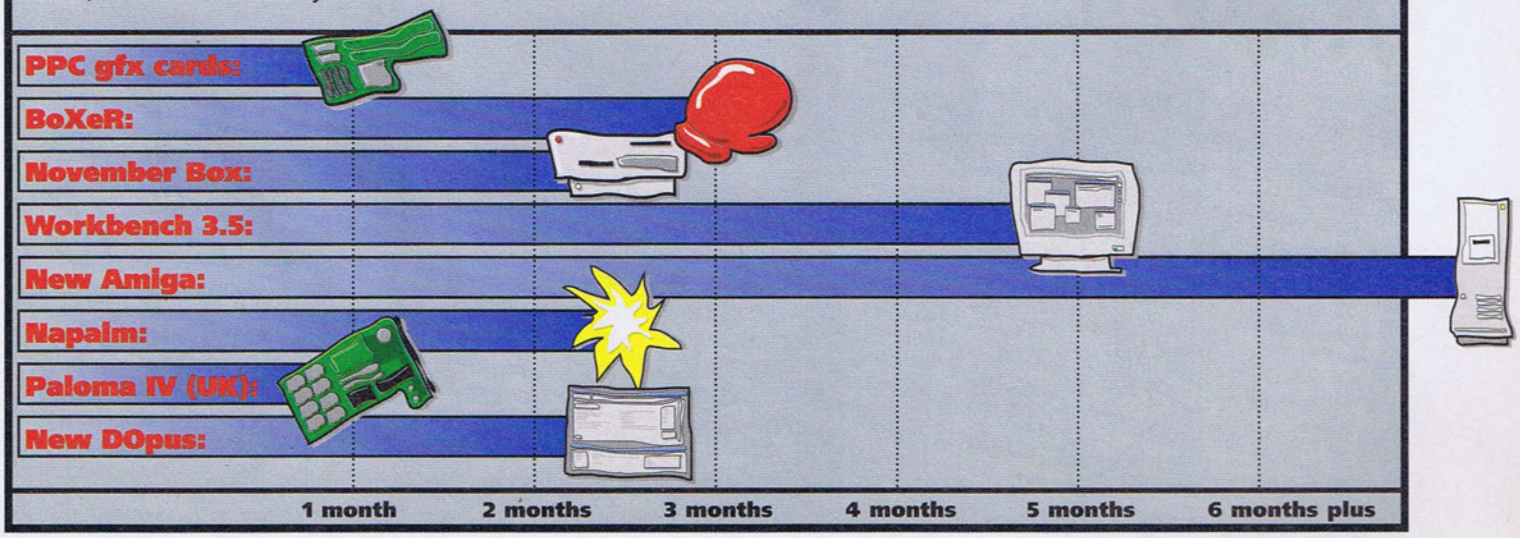
Another add-on planned for the feature bus is a high-performance hardware MPEG decoder using algorithms licensed from the Fraunhofer Institute, inventors of MPEG layer 3 and renowned for having the best sound. The price depends on sales predictions, but it should be somewhere around £100.



Melting Music's simple *GadTools* front end.

Estimated Time of Arrival

Based on what we've been told by people in the industry, here are our projections for when we expect the following things to get a UK release. As we get more information, the figures will get more accurate, but don't try to hold us to them, okay? If there's anything you feel we should cover in this section, let us know and we'll try to find out more.



Continued overleaf ➡

Apology

In the May 1998 edition of *Amiga Format*, we published an article entitled "Pirates clobbered by clickBOOM". This contained certain allegations against Brad Barnett of Canada. Future Publishing accepts that these allegations were entirely without foundation and unreservedly apologise for any offence or embarrassment which these allegations may have caused to Mr. Barnett.

SEAL Sale

Those Amiga users in deepest, darkest South Essex are very pleased. Not only did their Kickstart Amiga Sale go very well at the end of August, they're also in the middle of creating a web-based worldwide Amiga user group map.

In its final incarnation it will have a client-side imagemap which allows you to click in to a more local area, the UK for example, to find the Amiga user group nearest to you.

If you'd care to join up, you can contact the SEAL (South Essex Amiga Link) spokesman, Gary Storm, by emailing him at rusty@thunder.u-net.com

Diary

■ **Infomedia 98**, 3-4th October 1998. Contact Tony Mees + 32 (0)3 744.13.19

■ **Computer 98**, 13th-15th November 1998, Cologne, Germany. More details to follow.

Zips down

If you're in the market for a removable media device then look out for Iomega's range. They're busy reducing the cost of Zip disks, Jaz 2 drives and media, and more. For instance, the retail price for a six-pack of Zip disks is now £49, down from £69, working out as a saving of 29%.

An external Jaz 2 drive has now been reduced by 25%, from £399 to £299, while a single Jaz 2 disk is now only £79, a saving of 20%. Contact your local Iomega reseller for more details or visit the Iomega website at http://www.iomega.com.

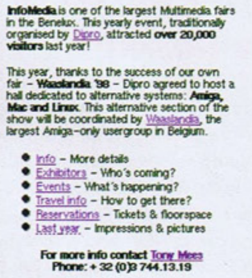
Those of you who subscribe or religiously buy *Amiga Format* on the day of publication will have just enough time to grab your passport and head for Antwerp on October 3rd and 4th for InfoMedia 98.

This is a general computer show which Amiga co-ordinator, Tony Mees, hopes to make the biggest Amiga show in Europe. If you're online, you'll probably have already seen InfoMedia banners on European web pages or BBSes, and there are posters for the event plastered all over buildings around Europe.

There are special deals involving travel from all over Europe to get to the show and loads more info can be found on the InfoMedia website at http://titan.glo.be/~waasland/infomedia98. Tony has also contacted over 800 Amiga dealers from around the EC and invitations have been sent to user groups and individuals around the globe.

It looks like being a great show if all Tony's efforts pay off, so try to make it if you can.





Although other platforms are featured, InfoMedia is set to become one of the biggest Amiga shows in Europe.

100 Issues ago

AF16 November 1990

AMIGA FORMAT

We look at what was going on in the Amiga market 100 issues of *AF* ago...



■ Cover feature: Make the great leap forward. All about the new CDTV and how it will affect the Amiga market.

There were also features on how flight sims on the Amiga compared with real flying, and on using new pocket/laptop computers with your Amiga. There's an interview with Robin Bilson, the brain behind the Real Things animbrush project, who envisaged a time when clipart producers would be much like any other raw product manufacturer – like farmers with fruit, for example.

■ On the disks: Still just the one disk, with a demo of Mindscape's *Captive* and an upgrade to 1.2 for *AMOS* owners.

■ News: Plugs for the new *Get the Most out of your Amiga* book and *AF*'s new ABC of 57,123 – up 40 percent on the previous figure. Confusion over whether the Video Toaster had been released in the States. Newtek said it had but we couldn't find anyone who had one. Two new Amiga bundles are on sale, *Screen Gems* and *Class of the 90's*, boosting Amiga 500 sales even further. Real 3D first appears.

■ Prices: A Star laser printer (HP II emulation, presumably) with only 1Mb RAM cost £2,172.35. Commodore were offering to repair defunct A500s for £49.95 and C64s for £39.95.

■ Games reviewed included: *F19* by Microprose (91%), *Loom* by LucasArts (85%), *Vaxine* by US Gold (85%), *Captive* (91%) and *Rick Dangerous II* by Microstyle (92%)

■ Serious products reviewed: *Medusa ST Emulator* from MacroSystem, a variety of RAM expansions for the A500, *Trax* (MIDI sequencer) from MCM, MIDI Toolkit from Data-Pak, Piglet Amplifier by Powertech UK, *Sound Express* sampler from IDG, GFA/HiSoft Basics head to head.

■ Notes: The quest for more power and memory starts here. People are writing in, wondering if their half-meg machine is enough, and the new raytracing packages coming out will also benefit from more power. However, a GVP 50MHz 68030 accelerator for an A2000 still costs more than two grand!

■ Pages: 244 ■ Cost: £2.95

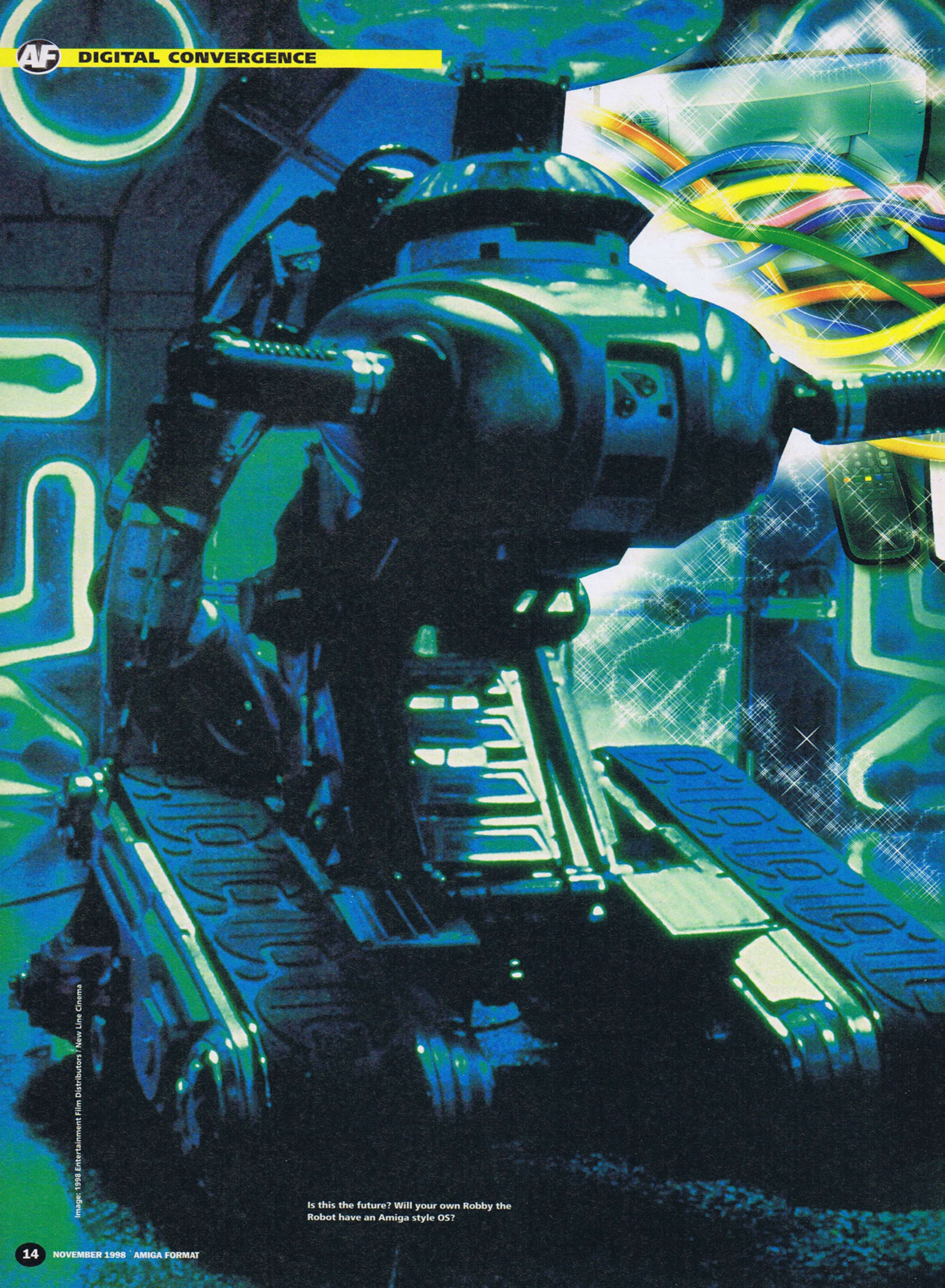


Image: 1998 Entertainment Film Distributors / New Line Cinema

Is this the future? Will your own Robby the Robot have an Amiga style OS?



Taking a Byte Out of the Future

The revolution waiting to happen

Having trouble getting your head around the future? Fear not, Amiga Inc.'s own **Fleecy Moss** introduces you to the stuff of tomorrow…

PLEASE NOTE: The opinions expressed in this feature are entirely the personal views of Fleecy Moss, and are not in any way officially endorsed by either Amiga Inc. or the ICOA.

There's a joke going around consumer electronic companies at the moment. A blind man walks into a shop and asks the assistant if he sells any Digital Convergence products. Of course, says the assistant, regular or decaf? Okay, so it's not a very funny joke (have you ever been to a consumer electronics company?), but what it illustrates is that, once again, the electronics industry has been hit by buzzword mania. If it'll sell their product then you can be sure they'll be marketing by using the buzzword.

> "… Digital Convergence is the future, and the Amiga's future. So what does that mean for all of us?"

But what is Digital Convergence? Jeff Schindler, the managing director of Amiga Inc. regularly fills his speeches with it. He says that the Amiga has what it takes to succeed in this market, that Digital Convergence is the future and the Amiga's future. So what does that mean for us?

Digital Convergence is being bandied about at the moment the way the term "multimedia" was 10 years ago. Then, as now, there was a great deal of confusion about what it included, what it didn't, who was "multimedia" and who was not. In writing this article, I'm hoping to give a very personal view of what Digital Convergence does and doesn't mean.

Digital refers to the "Digital Information" revolution. All information in such systems is presented as streams of numbers. There's an encoder to convert content of any type into a number stream, a means of transmitting the stream and then a decoder to convert the stream back into its original content format.

We're all happy with the idea of programs and data being represented as

Continued overleaf ➡

numbers, but what is actually happening now is that almost all other content is being moved from analogue to digital format.

First it was music. Analogue records gave way to digital tapes and the now ubiquitous CD. Phones have followed, moving from hissy analogue to crystal-clear digital. The next target is television itself; image, sound and video converted from proprietary analogue format to an open digital format. Forget PAL, SECAM and NTSC. Video as a stream of numbers is on its way.

The advantages of digital are clear. Numbers are an independent, abstract format. Encoders and decoders can be built into hardware or software. Number streams can be processed, encoded and, very importantly, manipulated between the encoding and the decoding. They can all be verified, error checked and repaired.

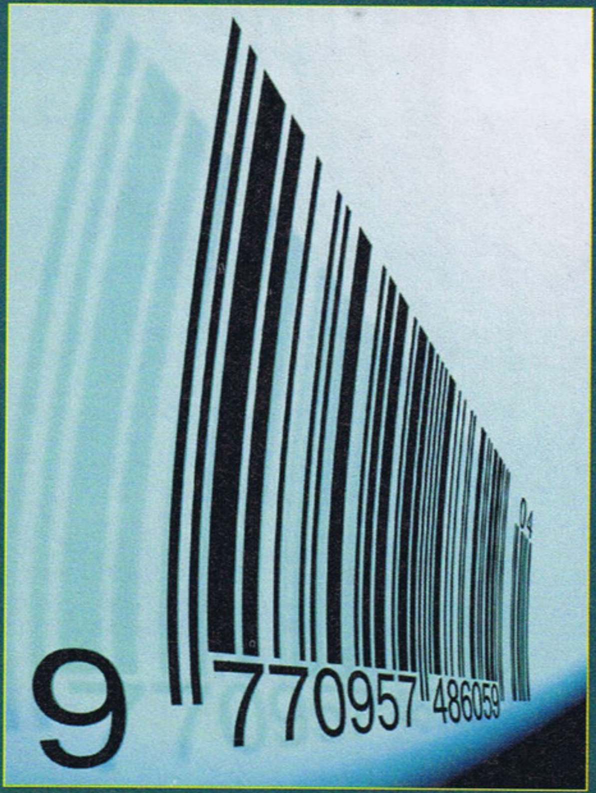
What this means is that the digital microprocessor, whether specialised or generic, embedded or full feature, is now the *de facto* universal component in virtually every electrical appliance.

> "... In the past, these devices have always been separate, standalone products... However, that was the past."

Look in your toaster, microwave, printer, phone, washing machine, video, television, cable box, video game console, hi-fi or computer and you will find the little silver and black blighter, chomping away on its favourite food – digital number streams.



Ben meets Amiga Inc.'s Jeff Schindler (left) and tries to interface with him.



But take a look at that list. Toaster. Microwave. Printer. Phone. Washing machine. Video. Television. Cable box. Video game console, hi-fi and computer. They all contain microprocessors, they all process number streams, they are all consumer electronic devices, they all require some sort of control panel.

They all take input, process that input using stored programs and produce output to perform their allotted tasks. Using the classic definition, they are all computers.

In the past, these devices have always been separate, standalone products. You bought your hi-fi to listen to music, you bought your television to watch TV and you bought your games console to play games.

They were all independent devices, probably in separate areas and often duplicating features, forcing you to have either great speakers on your hi-fi but only average speakers on your TV, or making you change cables on the dark side of the TV set whenever you wanted to play a console game. However, that was the past.

ROOTING OUT DIGITAL CONVERGENCE

Firstly, Convergence recognises the following features:

- All digital appliances are computers.
- All computers require an OS.
- Digital streams are a common language to any computer.
- All digital appliances can communicate with each other.
- All computers can perform exactly the same tasks.

Summing up, all consumer electronic devices can be computers, the only difference being their input (sensors, microphones, keypads, knobs, thermocouples, infra red, etc) and their output (motors, valves, speakers, monitors, televisions, alarms). For those of us with every port filled and enough spaghetti hanging out of the back of our A1200s to feed the Italian football team, this isn't news. This is the technical aspect of convergence.

Secondly, Convergence recognises the following:

- Appliances have very simple interfaces (physical or abstracted).
- Users do not want complexity.
- Most appliance users are wary of computers.
- Appliances are bought to provide a solution.
- Appliances are kept until they fall apart or progress invalidates them.

These are key points. Convergence is not about computers as we know them today. Yes, there is an operating system, but it is kept hidden from the users. Convergence must make life simpler for the user, not more complicated. Consequently, the technology must be more intelligent than today, performing housekeeping, installation and upgrade, maintenance, diagnostics and repair, all with the minimum possible input from the user.

The product was bought to provide a solution, not to send users into the bowels of file systems, registries, drivers and startup scripts. To provide such a technology requires intelligence, a great deal of design, understanding and insight upfront, a connected vision of the future and the ability to effectively market and deploy it.

For most computing companies out there today, at least one of these pieces is absent.

Finally, Convergence recognises the following facts:

- Entertainment is becoming a greater part of every person's life.
- There is a move from passive consumption to active participation.
- Information is required more than ever, but in distilled, usable formats.
- People want to get on to the Internet and other online sites (such as gaming, malls and information).
- Communication is becoming faster and richer (DHTML email, audio, video, chat, cyberworlds).

Shop. Mail. Play. Chat. Work. These are activities we do everyday, but what is happening is that they are being lifted up out of their real-world environments and placed into computer-generated environments where the advantages of



USB

USB – Universal Serial Bus. USB was designed to provide next generation intelligent device connectivity. It typically works over distances of five metres or less (although there are longer distance solutions), having been designed to allow devices to be connected to a single computer. It provides a hot swappable environment in which up to 127 devices can be connected without having to reboot or run a setup application. Most PC motherboards now have two USB ports, but USB devices themselves can act as additional sites or hubs, allowing devices to be daisy-chained.

These devices include everything from mice, keyboards, joysticks and monitors to printers, modems, scanners, speakers and CD-ROM drives. Its 12 megabit/second data rate will also allow new devices such as MPEG2 video-based products, data gloves, digitisers and low cost telephony and communications solutions such as ISDN and digital PBX. USB utilises the host computer to detect when devices are added and removed. The bus then automatically determines which host resource (including drivers and bandwidth) each device requires and implements them.

Another feature is that USB also provides power for each device, removing the stack of power bricks that are the norm today. More Information can be found at www.usb.org.

speed, memory, configuration, upgradability, centralisation and connectivity are available.

Computers are doing what they should always have been doing – taking over the drudgery and monotony of support tasks like filtering, compiling and preparation, allowing us to use our time and intelligence in a more useful manner. This gives us back our precious hours so we can be out in the real world doing more useful things.

THE MAGIC BREW

For Digital Convergence to succeed, it requires both hardware and software to become integrated in a more transparent manner. Pieces of this are already in place.

■ HARDWARE COMPONENTISATION

Whether you want to call it AutoConfig or Plug 'n' Play, there are major moves in the industry to make sure that all hardware is componentised. This has its roots in the distributed computing model and was a key element in the design of the "Classic Amiga" custom chip set. Each component performs a function or set of functions. Each component knows what it can do and is capable of communicating that knowledge, along with other information like status, requests, errors and interrupts to any other component. The beauty of componentisation is that the internals of a device are hidden, the interface is stable and public and putting the devices together in a framework becomes much simpler.

Various consumer electronic companies are trying to bring in standards, such as HP with their JetDirect, allowing a printer to be connected directly to a camera, or a scanner to a printer.

At a higher level we have I_2O, currently a componentised model for high-end servers, but slowly working its way down. Take a look at www.i2osig.org for more details.

■ CONNECTIVITY:

Take a look behind your computer or your video, TV or hi-fi. Nope, that's not some alien entity spreading throughout your house, it's cabling. Parallel, serial, monitor, RS232, stereo, cable, twisted pair, gamepad, SCSI. Now picture Mr. and Mrs. Family trying to bring all of their devices together.

One of the keys for the future is simple connectivity. Go to the shop, buy your latest device, take the cable and plug it into your matrix. One connector, one plug point, autoconfigure and BOOM! – it's available.

Luckily, the industry has also realised this and with USB (low end) and Firewire (high end), the dream mentioned above should become reality in the not to distant future, while also delivering the necessary next generation bandwidth, speed, convenience and distance.

> *"... now picture Mr. and Mrs. Family trying to bring these devices together. One of the keys is simple connectivity."*

SO WHAT'S THE PROBLEM?

Okay, we have the device componentisation, we have the connectivity, we have the open standards and the bandwidth is coming. So where is the digital convergence? What is the hold up? Basically, the hold up is that there is no operating system that brings together everything we have discussed. Sure, there are some embedded operating systems but they are used mainly for machine, robot and automation control.

There are PDA operating systems but they are lightweight for a reason, missing features and scalability. There are the heavyweight OSes, such as the Microsoft offerings, Linux, Apple and Be, but they have proved to be bloated, large and provide anything but the simplicity required.

Microsoft have begun to move into the PDA arena with Windows CE, and variants of that are starting to appear. For example, a WinCE variant called Dragon will power the next generation Sega DreamCast console, but it is still too big and bloated to really become a player. Guess what's left…

FIREWIRE

Firewire was conceived by Apple and then handed over to an open standards body, the IEEE1394 Working group (Sun could learn a lot from them with regard to Java). It is a multi-point, scalable, low cost, high bandwidth, peer to peer, intelligent digital interface allowing for devices that produce and/or consume digital information to be connected together and operate with no user intervention.

If it sounds a lot like USB then that's because there is a similarity. The difference is that Firewire doesn't rely on a host computer, so a camcorder can be plugged directly into a video or a music centre into a DVD player. More important is the speed. USB is set for all time at 12 megabits/second. Firewire starts at 100-400 megabits/second over ten feet and is planned to grow to 1.6 gigabits/second over 40 feet. NEC have also announced an infra red version that could transmit 125 megabits/second over 30 feet. As well as supporting asynchronous data transfer, it also supports isosynchronous (a new buzzword for the collectors) data transfers. These provide guaranteed data transfers at guaranteed rates, which will be crucial for digital video and next generation transfers where uninterrupted transport of time-critical data and just-in-time delivery will become increasingly important.

THE FUTURE

Digital Convergence is seen as having three distinct phases and we are already moving into the first phase.

■ PHASE 1: ENTERTAINMENT AND COMMUNICATIONS

Plug the digital television into the hi-fi. Connect up the DVD player to it and then add a computer. You now have the best of all worlds brought together; a home theatre, home arcade and home web office rolled into one. Something for all the family. In fact, I was at Jeff Schindler's house a month or so ago and his young lad was playing the latest Electronic Arts football game on their Destination system. It was awesome – Karmon sound system, 36-inch monitor, wireless controllers…

■ PHASE 2: HOME NETWORK

The next stage is to take the centralised matrix (TV, hi-fi, DVD player, computer, etc.) and begin spreading it around the house. A powerful home server that acts as a central data repository, a communications hub for the outside world and a processing powerhouse.

Small, cheap but powerful next generation A1200-type machines with flatscreen monitors in bedrooms will allow for networked games, multi-user systems, backed up storage, remote access from outside the home, integrated communications channels and centralised repositories for data and applications. Apple, in the first sensible thing they have done in years, will soon release the iMac, which attempts to go straight for this market.

■ PHASE 3: INTELLIGENT HOMES

The matrix now becomes home to the intelligent appliances, but not just dishwashers, dryers and microwaves. Climate control, security systems, structure systems (find drafts, damp, heat loss, leaks, subsidence, etc.), energy systems and mechanical diagnostic systems could be supported.

Stage 1 is happening here and now.

Continued overleaf ➡

INTERNET CONVERGENCE

Open Standards – In 1992 Europe adopted the Maastricht treaty and brought down the borders that had separated it for centuries. The result was a big jump in business opportunity and awareness. However, it wasn't as big as imagined. The reason was because, even though Europe now had efficient and unobstructed communications channels, each country still had its own currency. Conversion between these proprietary currencies, even in the open new Europe was still a major drag. With the ECU, this should deliver the benefits first imagined in 1992.

It's the same with Digital Convergence. Without open standards, digital convergence will fail. The Internet has given us a great start with TCP/IP, SMTP, POP3 and IMAP. Digital Video Broadcasting is finally getting its act together, as are the competing DVD and 56K modem companies. Java will help to deliver executable content to anyone. The lesson to all is that open standards are a catalyst to adoption and growth.

Bandwidth – The Internet has been done a great disservice by Hollywood, with people logging onto the Internet and expecting to find themselves flying through 3D datascapes, doing battle with intelligent viruses and logging into live Rolling Stones concerts (having gone to Internet-only performances for tax reasons). 28 and 56K modems just can't deliver that sort of bandwidth or speed, and for most people, neither can the Internet at the moment. However, over the next year or three this is set to change with xDSL and cable modems coming into the mainstream. With promises of speeds from eight to 30 megabits per second, a wider rollout of this technology may well finally bring the Internet alive.



Jeff helped Gateway to be the first into the market with the Destination and his experience with that project gives Amiga the knowledge and vision to thrive in this market. Stage 2 is starting to take shape as new houses, especially in the US, have network wiring.

Stage 3 has been talked about for years but has never happened because the infrastructure hasn't been in place.

WHAT IT MEANS FOR AMIGA USERS

For Amiga users it means the same as it has always meant. The Amiga will be at the forefront, changing the technology map and vocabulary so others may follow. Amiga technology will hopefully give us a huge advantage in the digital convergence market, but digital convergence is at one end of our next generation OS and that scale is a sliding one. The underlying OS can be exposed as much or as little as desired.

> "... the Amiga will be at the forefront, changing the technology map and vocabulary so others may follow."



This allows third parties like the big consumer electronic companies to produce the sort of products talked about in this article. It also allows other third parties like phase 5 and Pios to build kid computers, desktops, customised audio and video stations, high-end workstations and servers.

There is a misconception (one of many) that Amiga Inc. are moving away from supporting its traditional computing markets, intent only on providing glorified games machines, singing pencil sharpeners and pop up toasters. Nothing could be further from the truth. OS5 will be scalable and configurable from low-end all the way up to the high-end.

What it does mean is that being as elegant and flexible as we intend it to be, the Amiga will really be able to push into almost every market and will be able to show its superiority.

When that time comes, we'll want you, the loyal amiga users and developers, to be there with us when we once again show the world how things should be done.

DIGITAL SUBSCRIBER LINES

xDSL (Digital Subscriber Lines) are a family of high-bandwidth digital transport protocols that will become the dominant connectivity protocol for residential and SOHO (Small Office Home Office) users over the next few years. Forget 28.8, 56K, V90 and ISDN. Forget content creeping into your computer GIF by GIF. Forget about new cabling.

xDSL works over existing copper telephone lines. It provides a continuous connection. Yes, it needs a special modem, but over the next year motherboards for PCs (Compaq) will start being produced with the modems as an integral part.

There are various flavours: G.lite, SDSL, HDSL, ADSL and VDSL. Full rate ADSL (asynchronous) is aimed at computer users and provides 1.5/2Mbps upstream (sending) and 8Mbps downstream (receiving). VDSL (Very High Data Rate) provides 4-8Mbps upstream and a whopping 52Mbps downstream and this will be mainly used for the digital video market. People point out that cable modems can reach 30Mbps over the cable network but cable networks have many problems (they are a broadcast circuit, so all clients can see each other) and the bandwidth is ultimately fixed so the more clients, the less bandwidth per client.

In the US, Asia and Australia, ADSL is being rolled out by many telecommunication companies in large test areas and it is being snapped up by bandwidth-hungry users. For more information, look at www.specialty.com/hiband/dsl_index.html

BT were the first European company to join the UAWG (Universal ADSL Working Group) and they plan to develop ADSL Lite for home use. The issue is a little confused as they are also pushing ISDN for home use (BT Highway), currently on trial.

ADSL may be trialed soon, although a pricing structure is yet to be unveiled – it may be fast but it could end up being pricey too.

IRC: Internet Relay Chat

It's good to talk, so Gareth Murfin invites everyone over to his Amiga for a chat.

ON THIS MONTH'S CD AFCD32:-In_the_Mag-/IRC

Communicating with people on the Internet using email is great but it lacks the fluency of a real conversation. People can consider their replies and think up smart answers. You're usually only conversing with one person too, which is rather boring at times. There is a different, more fluent way which allows you to chat with any amount of people you like, though.

This is called Internet Relay Chat or IRC. However, IRC requires you to be on the net all the time you're talking, which can obviously make your phone bill sky high.

IRC requires an IRC client. The Amiga has a few but I'm going to concentrate on *AmIRC*, debatably the best IRC client on any platform and certainly more advanced than *mIRC*, the PC's leading IRC client.

Other Amiga IRC clients include *Grapevine*, *IRCII* and *DnetIRC*. There are also a few in the development stages which look very promising, including *Mindlink*, a '*MUI*-free' IRC client, and my very own *LunaIRC*, which actually supports coloured text, something that no other Amiga IRC clients can currently do.

> **"IRC requires you to be on the net all the time you're talking, which can obviously make your phone bill sky high."**

COMMON SYNTAX

/Join <channel> – Will make you join the channel specified.
/leave <reason> – Will make you leave the channel.
/me <action> – Performs an action. For example, '/me yawns' would make you yawn in the channel.
/Names <channel> – Lists users in a channel.
/Notice <user or channel> <text> – Sends a notice to a user or channel.
/Ping <user> – Sends a 'ping' to another user to check your/their speed.
/Dcc <chat or send> <user> – Direct client to client linkup, either for chat or sending files.
/Ctcp <user><Version or time or Clientinfo> – Requests information from the user's IRC client.
/Map – Gives you a map of all available servers.
/Whois <user> – Gets information about who the user really is.

The following require Ops:
/kick <user> <reason> – Kicks a user.
/Op <user> – Ops a user.
/Deop <user> – De-ops a user.
/Voice <user> – Gives a user a voice.
/Unvoice <user> – Removes voice from a user.
/ban <user> – Bans a user.
/Kickban <channel> <user> <reason> – Kicks and bans a user.

Whichever IRC client you use, you'll need to know some basic commands so you can actually get into a channel and begin to chat. The first command you need to know is /Server <servername>. This will connect you to the server you specify. So /Server Dragon.dal.net would log you onto Dalnet's Dragon server.

Now you should type /Join <channelname> which will make you join the channel specified. Typing /Join #AmIRC would log you into the Amiga Channel on Dalnet. Now you're in a channel with dozens of other Amiga users, all chatting in real-time. Make sure you have your capslock button off and just type something like, 'Hello I'm new to IRC,' and the friendly people in #AmIRC will look after you.

All IRC channels have Channel Operators (Ops) whose job it is to keep the channel flowing smoothly. If you swear or insult someone, you'll probably be kicked out of the channel. If you consistently cause trouble then you'll probably be banned from joining.

Channel Operators will have a small green dot next to their name (or an @ if you aren't using *AmIRC*). If you see a small yellow dot next to someone's name (or a + in other IRC clients) then they have 'Voice'.

HEARING VOICES

Voice is simple: it allows users to speak in a moderated channel, which is a channel where no-one is allowed to speak, apart from Ops and anyone they decide to give Voice to.

Voice has come to stand for a rank lower than Ops but higher than a normal user, so if you see a Voice, the chances are the channel isn't even moderated. Channel Operators don't take too kindly to people asking for Ops, so avoid doing this at all costs.

If you stay in your favourite channel long enough and prove that you're not a psychopath then you'll probably get Ops sooner or later. I was in DalNet's #AmIRC for nearly two years before I became a Channel Operator.

AmIRC is further enhanced by all the extra scripts available for it which provide thousands of extra commands using the versatile ARexx port.

One of the original scripts which inspired them all has to be *MCF* by Donald T. Becker. *MCF* was miles ahead of its time and is still widely used today for its AutoOp features and useful remote user commands. These allow you to Op yourself from another user, providing you're on their friends list.

OTHER USEFUL SCRIPTS

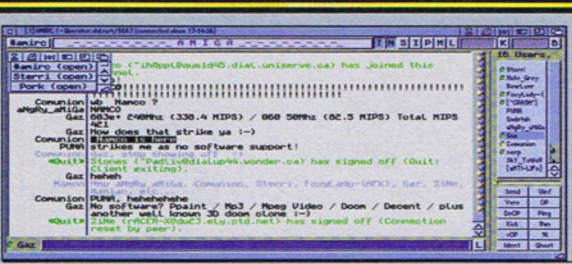
Also by the same author is *MCF Buttons*, which is basically an extension of *AmIRC*'s user buttons, but it allows you to have one set of buttons for up to nine *AmIRC*'s. This means one Buttons window for all running *AmIRC* Clients.

Next is *Kuang Eleven*, which has hundreds of powerful functions, including the ability to compress a file with LhA before sending it and to then extract it automatically on the other end, all done by one simple command. *Kuang* also features a GUI and brilliant *XDCC* features for exchanging files.

Also available is *DWaRFx*, an entire set of scripts based around the excellent comedy, *Red Dwarf*. *DWaRFx* has hundreds of useful features, ranging from nasty 'war' scripts to a built-in, online *Connect 4* game.

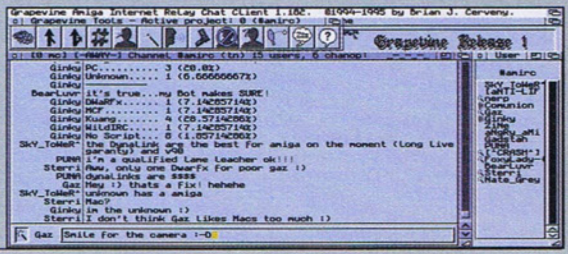
WildIRC is another great script for *AmIRC*, which is a text manipulation script. It can handle and produce huge ASCII pictures and all kinds of styles. It even displays ASCII pictures in a new

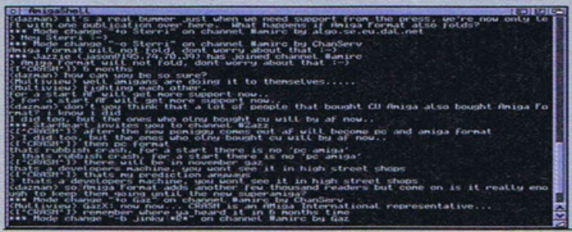
THE IRC CONTENDERS



NAME: *AmIRC.*
DEVELOPER: Oliver Wagner.
INTERFACE: *MUI.*
URL: http://www.vapor.com/amirc/
LATEST VERSION: 2.0.4.
FEATURES: URL grabber for interfacing with a web browser; event handling allows you to bind sound effects; auto-deiconify or Rexx scripts to certain events; nick completion; supports cut and paste; versatile ARexx port; supports drag and drop sending of files. **COMMENT:** The world's best IRC client.

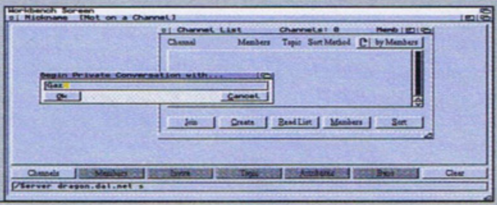
NAME: *Grapevine.*
DEVELOPER: Brian J. Cerveny.
INTERFACE: *Gadtools.*
FTP: helser56.res.iastate.edu/pub/grapevine
LATEST VERSION: 1.182.
FEATURES: Graphic icon toolbar for common operations; modular DCC programs allow users to write their own DCC clients; fast scrollback; configurable buffer size; point-and-click user operations like op, ban, kick, whois.
COMMENT: Excellent and easy to use.

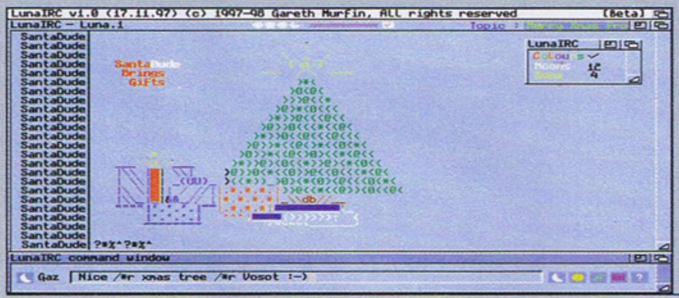




NAME: *IRCII.*
DEVELOPER: Generoso Martello/Michael Sandrof.
INTERFACE: Text only.
E-MAIL: gene@byte.it
LATEST VERSION: 2.8.2.
FEATURES: All of the normal IRC commands; redirectable DCC chat connections; basic scripting.
COMMENT: Very efficient but not pretty too look at. For experts only.

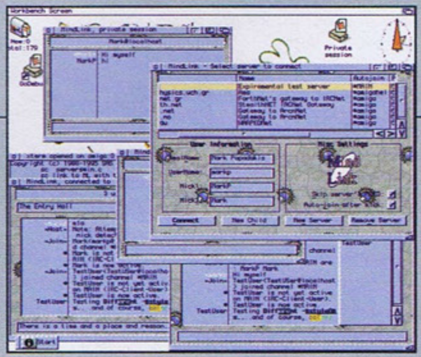
NAME: *DNetIRC.*
DEVELOPER: Rick Kent.
INTERFACE: *Gadtools.*
E-MAIL: rkent@sparc1.csubak.edu
LATEST VERSION: 1.0.
FEATURES: All normal IRC commands; summon; *Unix* compatibility.
COMMENT: Tough to install, only for experts. The Amiga's first IRC client.





NAME: *LunaIRC.*
DEVELOPER: Gareth Murfin, David Newton, Alvaro Thompson.
INTERFACE: *MUI* or *Gadtools.*
URL: http://welcome.to/alpha-software
LATEST VERSION: Beta non-public release.
FEATURES: Coloured text support; WWW-style transfer anim; most of the IRC commands.
COMMENT: Development halted because it was never going to compete with *AmIRC.*

NAME: Mindlink.
DEVELOPER: Mark Papadakis and Stefan Smietanowski.
INTERFACE: *ClassAct.*
URL: http://phaistos.forthnet.gr/markp/MindLink.html
LATEST VERSION: Beta non-public release.
FEATURES: CTCP2 protocol supported (no other clients support this); nick completion; sketch board support (for group online painting!); Fetch ftp files support; URL grabber; individual window iconify options; minimum memory usage.
COMMENT: Could be a very efficient, well-featured client to compete with *AmIRC.*



window so they aren't spoiled by other text in the channel. It contains over 200 different kicks for *AmIRC.* Another older script is *Pheonix*, which is renowned for its automatic features. It may be old but it's still got some things the others haven't, such as the bizarre feature of country code lookup. Finally, there's *Cybeonix*, famed for its kick script which spawned hundreds of copies. Its encode has also come to be the standard in Amiga encoded text on IRC.

All these scripts are useful and are worth installing, but the best part is that they're all Freeware so it costs you nothing to try them out.

> **"All these scripts are useful and are worth installing, but the best part is that they're all Freeware..."**

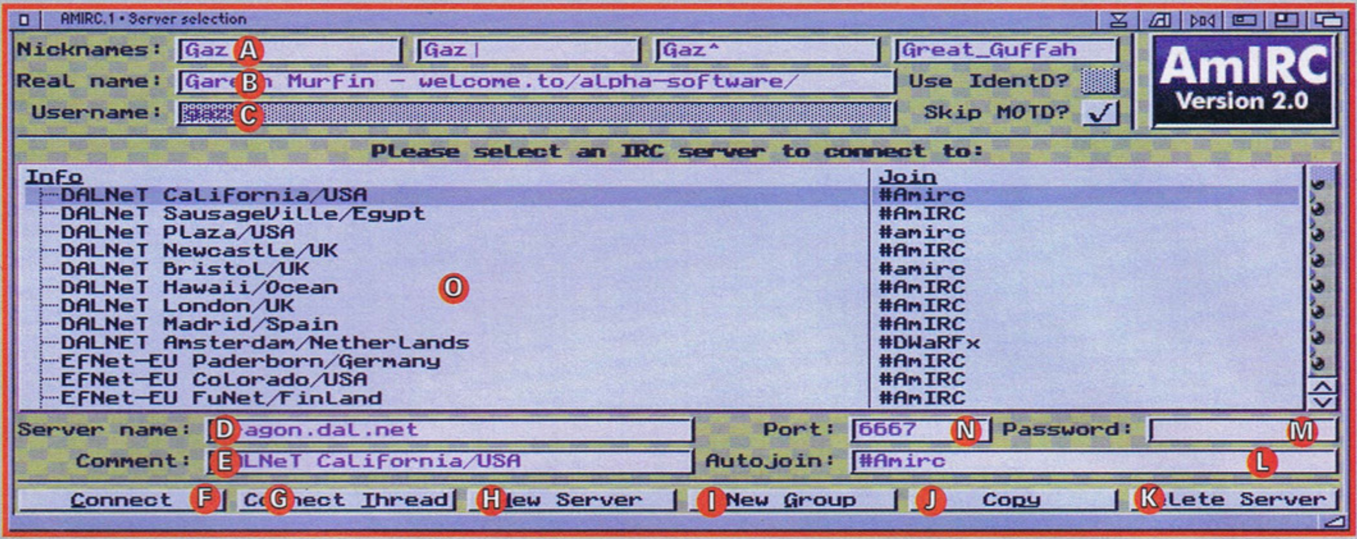
Hopefully those of you who are on the net and haven't used IRC might give it a try now, or maybe you're not on the net but this look at IRC has convinced you to give it a try. Whatever your situation, all the IRC software you need is here on this month's CD.

Cya l8r m8 :-) ´Quitª Gaz (gazy@client87bc.globalnet.co.uk) has signed off (Gaz has left the building)...

Continued overleaf ➡

A Guide to AmIRC

Most people regard *AmIRC* as the best Amiga IRC client, and it's certainly the most common one, so here's a quick guide. The first thing you must do is set up the basic options:



A – This is where you enter your nick to be used in IRC. Give four different nicks so if yours is already in use you'll be allocated another one.

B – Enter your real name here and any other short details, such as your website address or email.

C – This option could be 'ghosted' because your username is set up by your TCP stack. If it isn't then put your username in (your username is usually the start of your email address. For example, my email address is gazy@globalnet.co.uk and my username is gazy.

D – This is the server which you'll be joining. You can either click on an existing server or type in one you know.

E – This is just a quick comment about the server. It's usually the name of the large network that the server is connected to, as well as its location.

F – This will connect you to the server shown in 'Server name'.

G – This will keep your current server open and will open a new one too.

H – Push this if you want to add a new server to the list.

I – Push this if you want to open up a new 'directory' in your server list (similar to the hotlist which is found in *IBrowse*).

J – Copies a server entry.

K – Deletes a server entry.

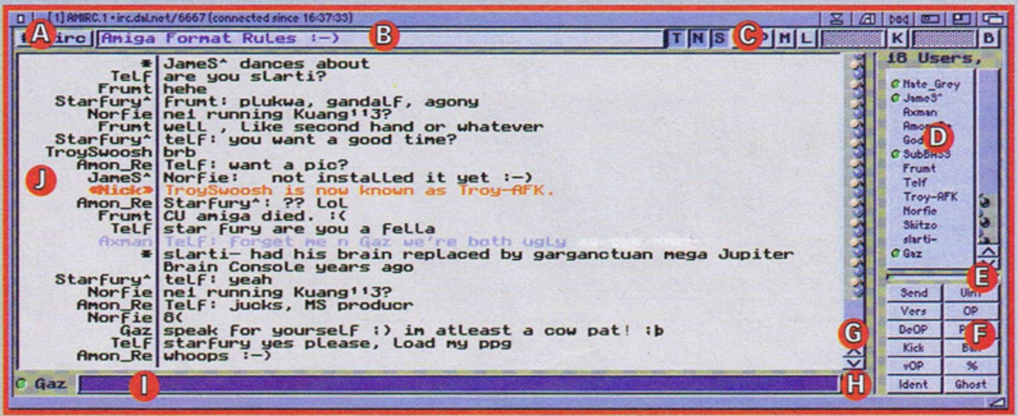
L – This is the channel you'll automatically join once you're connected to the server.

M – If you own the channel then you can keep your password here so you never have to go hunting for scraps of paper.

N – This is the port number to connect to the server on. Most servers accept 6667-7000.

O – These are all the Servers which *AmIRC* already has in its preferences file.

Once connected to a server, you'll need to know what all the buttons do. Here's a quick run down:



A – The channel which you're currently in.

B – This is the 'Topic' of discussion. Don't worry, nobody ever sticks to what's in the topic. It's usually only Channel Operators who can change the topic.

C – These are the channel mode buttons and can only be used by Channel Operators. They have the following functions :

Topic protection (T) – Toggles topic protection on/off. When the topic is protected, only Channel Operators can change it. When protection is off, anyone can change it by simply typing in the topic window and pushing return.

No Messaging (N) – Toggles messaging on/off. When active, a user can only write to the channel if they have joined it. Otherwise, from outside the channel you can do /msg #channelname <message>.

Secret (S) – Toggles Secret mode on/off. When active, the channel is invisible until it is joined.

Invite Only (I) – Toggles invite only on/off. When active, users can't join unless they have been invited by a user in the channel. To invite someone, type /invite <their nick>.

Private (P) – Toggles private mode on/off. When active, the channel is invisible in the global list of channels which is brought up by doing /list.

Moderated (M) – Toggles moderated mode on/off. When active, only Channel Operators and users with 'Voice' can type in the channel.

Limit (L) – Sets a limited number of users in the channel. Most Amiga users will cleverly set it to a series in the 68K CPU. For instance, in #AmigaQuake it is set to 68060, although anyone can join.

Keyword (K) – Toggles key word mode on/off. Active users have to specify the correct keyword before they can join the channel.

Ban (B) – Brings up a list of current bans on the channel.

D – This is a list of users in the channel. Double click on a name to perform a /whois on them to find out their name, etc. Clicking once on a user's name will set that user as the default to perform other actions on, such as any action from the user buttons. For instance, if you highlight the nick 'James' and then click 'Kick' in the user buttons, it is the same as doing /Kick James.

E – Lag-o-meter. This tells you the speed of your connection. The colours indicate how 'lagged' you are, ranging from green (not lagged) to yellow, to red (lagged). If it is ever red and flashing then you should connect to a new (faster) server.

F – These are very handy 'user buttons' to save you having to type out commonly used syntax. They can be configured by selecting 'setup' in the *AmIRC* Settings menu.

G – This scroll gadget lets you scroll back and look at everything which has been said.

H – This button will log the current window to a text file in your logs directory.

I – This is where you enter the text to 'speak' to the people in the channel. Once you type something and push return, everyone will be able to read it.

J – This is the main feature of the interface and it displays all incoming text.

SCREENPLAY

The latest games, hints and some clever programming from you!



This month, I haven't had much time to look over all the new titles and reader games because I've had a lot of work on developing a new Internet -based news service.

It will include news on a variety of topics, and each issue will be emailed to people who sign up when it's ready. It isn't quite finished yet, but if you are on the web, why not go to www.futuregamer.com and leave your email address. Then we'll send you a message to tell you when we go live.

In the meantime, Ben and Nick have tried hard to mimic my inimitable style and have done a [surprisingly good – Ed] job of showing you what to get and what to avoid. See you all next month...

Andy Smith

AMIGA FORMAT'S REVIEW POLICY

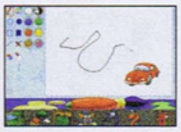
WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws are not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet..
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.

Previews





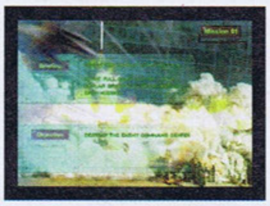

We were the first people to cover it and now Ben Vost can bring you more news on clickBOOM's answer to C&C.

Napalm



Napalm	£TBA
Release Date	Christmas
Publisher	clickBOOM
Requires	16Mb RAM, CD





Although the demo only has one mission, it'll keep you busy for quite a few hours!

We were the first people in the world to bring you news of *Napalm*, clickBOOM's new game, and since the demo came out (it's on our CD in the -Screenplay-/commercial drawer), the Internet has been heaving with people shouting about how good the game is looking. With huge graphics and a wide variety of units, the game we reported on back in our May 1998 issue looks like it's going to be an absolute doozy!

The demo is limited to ten minutes, which isn't enough time to beat the computer, but it gives you a hint of what the finished game is going to be like. If you pre-order the finished game with clickBOOM, you get a special code which gives you more time and money; enough, in fact, to give the bad guys a sound thrashing in the demo.

clickBOOM are looking at a Christmas release for the game, which promises to really take advantage of machines that people have spent some money on, meaning they must be the biggest-selling games company around right now after the sales of *Myst* and *Quake*.

However, sales aren't amazing, certainly not enough for clickBOOM to consider porting *Quake* to the PPC yet. Unfortunately, it's something of a chicken and egg situation – PPC owners are refusing to buy the 68K version because they don't want it and clickBOOM are refusing to do the PPC version because there aren't enough buyers for it. The problem is further exacerbated by the fact that



Huge background graphics will make Napalm stand out from other real-time strategy games like a wolf among sheep.



Games Master System

One for eggheads now. Paul Manias' *Games Master System version 2* has been released on Aminet this month. The whole point of the system is that it provides an easy-to-use API for games programmers working in *C, Assembler, E* or *Basic*. Programs using *GMS* can be run on other 68K platforms without recompilation, given the existence of a version of *GMS* for that platform, and the API offers lots of help for programmers wanting to add functionality like graphics card use to their games.

However, *GMS* is not a freebie. If people want to use it, there are registration fees for both developers and end-users, making it somewhat less attractive to games buyers as a product (who wants to buy a game and then have to buy a program to be able to run it?). That notwithstanding, Paul's effort is a good one and along with *RTGMaster, Rainbow, AHI* and others, it indicates a move towards more system-friendly games creation, which can only be a good thing as Amigas get more and more varied.

More details on *GMS* can be found in the archives for the system in dev/misc of your local Aminet (look for gms_dev.lha and gms_user.lha), or by emailing the author, Paul Manias, at pmanias@ihug.co.nz



Battle action. Yesterday.



This much firepower also requires a hefty amount of horsepower. clickBOOM recommend an '060.

Adiboo

Alive MediaSoft are planning to bring educational software back to the Amiga with the *Adiboo* range of educational games. Amiga owners who are somewhat longer in the tooth may remember that the *Adi* series started on the Amiga, courtesy of Europress Software, but subsequently moved to the PC. Now the little alien is set to return to the Amiga in a set of programs designed to appeal to 5-7 year olds.

The title has a wide range of different activities, mainly devoted to reading and counting, but also incorporating other fun things to do and games to play, along with "learn-while-playing" activities like the cartoon construction kit.

If this game goes well, Alive plan to bring over more of the range, which extends from pre-school to GCSE level.

For more information, you can contact Alive on 01623 467579.



As you can see, there's lots to see and lots to do for everyone with Adiboo! (Urgh – Ed.)

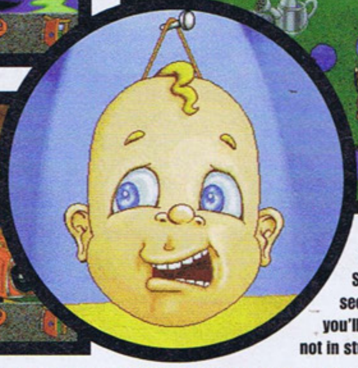
Adiboo	£TBA
Release Date	TBA
Publisher	Alive MediaSoft
Requires	TBA











We're weren't even sure this should be in ScreenPlay, but when you've see the varied game types, you'll know it should be in here, not in stuffy old Seriously Amiga.



the port needs to be submitted to iD Software again.

If clickBOOM were to be able to afford that then they would either have to offer the game in a new version for PPC owners, or charge for the upgrade in order to at least cover the costs of the port, let alone make enough money to be able to continue offering games like *Napalm*. Anyway, you can contact them at http://www.clickboom.com or call 001 (416) 868 6388.



Take that, you evil robots! You can tell this shot is from the registered demo because we're winning...







The Statue of Liberty is just one of the huge graphics that's only on the demo level.

GunBee F99

Next month we'll be bringing you a review of *GunBee F99* from Epic. It's not a big game by any means, but the anime style it's in and the way it works are guaranteed to raise a smile. Although it's a simple, vertically scrolling shoot-em-up, a bit like *Xevious* since you not only have to shoot things in front of you but also bomb stuff on the ground, it has that one-more-go addictiveness that's always attractive.

Although it doesn't affect gameplay at all, you may be interested to know that *GunBee* will be the first game we've ever reviewed from Peru, and if Mr. Lobsang Vögel Alvites Szaler's game sounds familiar, that's because you may have played an earlier version of it on *AF106*'s games coverdisk.

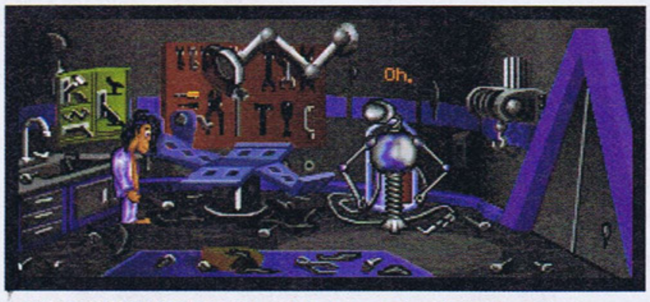
Playable as a single player game, *GunBee* should provide a lot of entertainment, even though it's only going to cost £8.99. For more information, you can either wait until our next issue when we plan to have a full review, or you can call Epic on 0500 131486.

Sixth Sense Investigations

Nick Veitch calls on his paranormal powers to review the latest Epic adventure.



Your travels will take you away from our world, to a world of work-obsessed animals...



... and to a highly automated planet full of robots.



This is where the local inhabitants come for a good lube job.

You can't effectively patent a game genre, which is a shame for LucasArts as they would be sitting on a huge pile of cash by now. *Monkey Island* was a phenomenal success on the Amiga and prompted numerous lookalikes, some of which were rather good in their own right, like *Simon the Sorceror* and *Flight of the Amazon Queen*.

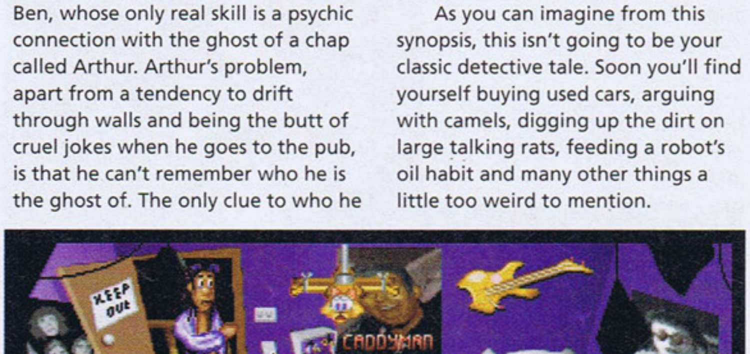
Sixth Sense follows the same concept quite strictly. There's a split screen with the action taking place in the top two-thirds, the lower area being for action buttons and an inventory display. A text line spells out the actions for you. For example, click on "use" and the text line will come up with "use". Click on the glass in your inventory and the text line will now say "use the glass" and so on. This is a tried and tested way of driving a game engine and should be simple enough to use pretty intuitively, even for our younger readers. In fact, the plot itself is probably the thing most likely to cause confusion.

You play the part of a private eye with a Sherlock Holmes fixation, partnered by a young bloke called Ben, whose only real skill is a psychic connection with the ghost of a chap called Arthur. Arthur's problem, apart from a tendency to drift through walls and being the butt of cruel jokes when he goes to the pub, is that he can't remember who he is the ghost of. The only clue to who he really is/was is an identity card with his name on it. All this is beside the main plot to this adventure, though, as no sooner has the game started than the local toy-shop is ransacked by robots from another dimension who kidnap Ben (if only) and then nip back to their own dimension via a portal in the back of the garage.

As you can imagine from this synopsis, this isn't going to be your classic detective tale. Soon you'll find yourself buying used cars, arguing with camels, digging up the dirt on large talking rats, feeding a robot's oil habit and many other things a little too weird to mention.

> **"Soon you'll find yourself buying used cars, arguing with camels, digging up the dirt on large talking rats..."**





Kids, eh? Is that any way to treat a cat?





A cat that's scared of mice (above) and a fraudulent rat (left).







There are plenty of puzzles to solve before you leave Earth.

There are plenty of objects in the game, many of which seem to be completely superfluous. This means you have to be careful about what you pick up. If you pick up something completely useless, it'll just confuse you later on and be one more item you're incessantly trying to use with everything else you come across.

Without giving too much away, a lot of the puzzles in the game aren't solved in the most obvious of ways. I wouldn't say they were gratuitously difficult, but it's safe to say many will have you stumped for quite a while.

Then again, in some parts of the game it seems possible to proceed quite quickly. The mixed pace of *Sixth Sense* certainly contributes towards its ultimate enjoyability.

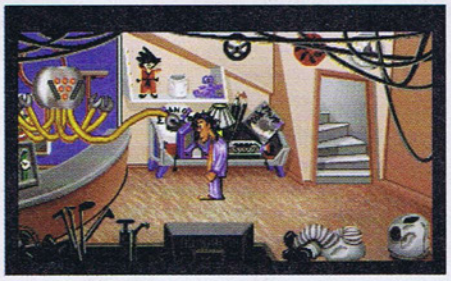
Talk to me

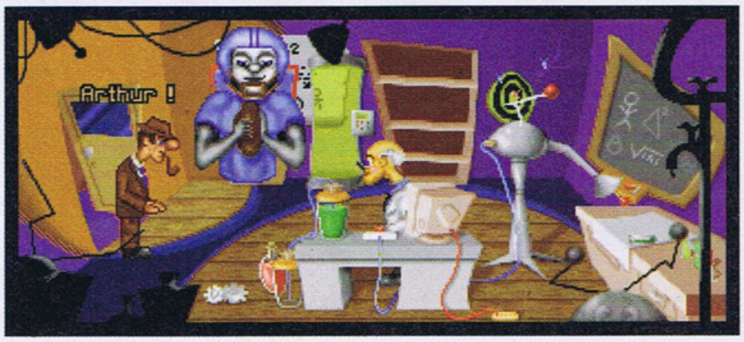
The speech is a bit of a mixed blessing. Although most is well acted, I find the speech of the main character a little monotonous and depressing. In any case, after you've heard him say "I should work out a better plan" or the equivalent several dozen times, you'll be reaching for the on-screen text option. The speech really slows the game down. Some of this is unavoidable (in general you can read faster than you can listen to someone talk), but some isn't.

All the speech seems to be loaded from disk just before it's spoken, introducing a pause between your action and the speech. If you haven't installed the whole game to hard drive, and it does take up a weighty 250Mb, then the speech will be loaded from the CD, taking even longer. Why couldn't some of the speech be pre-loaded in a scene, ready to be used when required?

There may be a memory issue for less expanded machines, but even on an A4000 with 64Mb of RAM free, there didn't seem to be any speech caching going on. If you do install the game to hard drive, you'd be advised to up the buffers allocated to the device (e.g. addbuffers hd0: 500) if you have the memory.

For reasons best known to themselves, the developers have decided to create their own installation utility, instead of using the perfectly familiar and usable Commodore one. Although it works, it does look a little sloppy and you may feel a little nervous using it, especially while your disk drive is whirring away and the progress bar stops at 38% for a few minutes.





Decisions, decisions...

The game gives you three different install options, depending on the amount of space you wish to use on your hard drive. A minimum installation takes 20Mb, while the whole game will require 250Mb.

The saved game files are reasonably small, but for some reason you're limited to a mere 50 of them. This may sound like a lot, but in such a long game you might want to save often. There doesn't seem to be any way of deleting previous games either, so you'll have to hunt out the saved game drawer and delete them by hand if you're running close to the limit.

The game engine itself runs fairly well, although some of the animated parts of the backdrop occasionally have a habit of repeating themselves endlessly. Sometimes objects which you've picked up seem to remain on the screen, which can also be a little confusing, but overall this doesn't detract from the gameplay.

Generally, the graphics are okay. They're done in a sort of cartoony-style and the main characters are pretty well animated. However, it isn't up to the standards of, say, *Flight of the Amazon Queen*, although there are probably more locations to be found in this game.

A lot of time, effort and thought has gone into the plot structure of this game and it shows, mainly because it's so entertaining to play.

Although not quite as good as *Monkey Island*, it's certainly getting there. Only the minor flaws with the game engine detract from what is otherwise a very enjoyable game AF

An eight-armed barman (top). No tale is complete without a mad professor and a ghost (left).

PUBLISHER: Epic Marketing (0500) 131486
www.epicmarketing.ltd.net
PRICE: £29.99
VERSIONS: Floppy, CD
REQUIREMENTS: AGA, 2Mb RAM (4Mb and hard drive recommended)
AVAILABLE: Out now

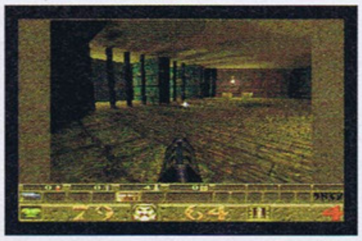
Pros and Cons

+ Huge game.
+ Full speech.
+ Well animated.
- Some glitches.

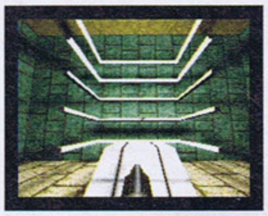
OVERALL VERDICT:
Some glitches in the engine detract from a very playable game.

82%

Aftershock



If you just can't get enough of Quake but you find it too easy, Ben Vost may have just the thing for you.



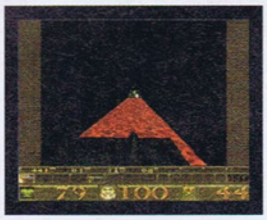
Not all slipgates are built the same way, you know.

Aftershock is YAQA. That is, "Yet Another Quake Add-on". I don't expect it to be the last we review in these pages either, but it's a slighter CD than any of the Total Conversions we've already reviewed.

It has a few new levels but it mainly consists of stuff from the Internet (hey, we can do that!), along with a PC level editor so you can make even more levels.

The level editor obviously doesn't work on the Amiga, but you can now get *Quest*, a port of a PC level editor, if you fancy creating some of the first Amiga-based *Quake* levels. Installation is pretty much the same as usual – drag the drawer over to your Quake dir (the drawer in question being one called AS) and make a new starter script with "-game AS" in it.

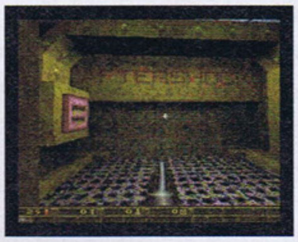
The levels themselves are beautifully lit and they'll really tax your machine. They all feel very claustrophobic, even from the very first level when you go into a vaulted "cellar" to retrieve a grenade launcher and avoid the zombies.



Row, row, row your boat. Unless it moves automatically, of course.

> "The scary thing... is the difficulty level. Aftershock is really for people who laughed at Quake on Nightmare level."

The scary thing about this add-on is the difficulty level. *Aftershock* is really for people who laughed at *Quake* on Nightmare level. I shudder to think what *Aftershock* is like on





Nightmare; I haven't even tried. As usual, you start with a shotgun and not many shells. The biggest problem is that you can all too easily end up having to fend off several ogres or knights with just your axe as it's not exactly difficult to run out of shotgun ammunition.

Are you hard enough?

At least it isn't boring though, unlike the *X-Men* game. Keeping the levels dark has meant that the old *Quake* syndrome (zooming left and right on your office chair) is back, as you try to dodge grenades or swipes from swords. The best thing about this add-on is the fact that if you're an acknowledged fragger, this might just give you pause for thought.

There is the argument that by making the game too difficult just ruins it. It has to be said that it never gets any easier, but that shouldn't deter anyone fed up with going through *Quake* on a harder level just because they're bored.

The other levels you get on the CD are an added bonus. Trawled from the Internet, they're of variable quality and, to be honest, you'd be better off getting Weird Science's *Time of Reckoning* if you want to make decent use of them.

However, for anyone wanting the ultimate *Quake* challenge with straightforward carnage, *Aftershock* is definitely the one for you.

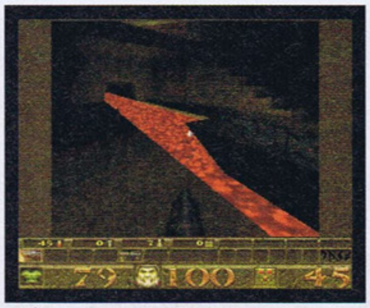




As you can see from the shots taken, Aftershock is beautifully designed.



Ha! I'll get those ogres from up here where they can't get me, unlike every other *@&! monster in the game...



A boat, on a flaming river, yesterday.

SUPPLIED BY: Alive MediaSoft (01623) 467 579
PRICE: £9.99
REQUIRES: Quake

Pros and Cons

- + Very hard.
- – Very hard.
- + Nicely laid out levels.
- + Good if you like blasting away.

OVERALL VERDICT:
No new textures, weapons or themes, but it's still a blast. For serious Quake players only.

60%

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X-Men Ravages of Apocalypse



Another add-on for Quake, and this time it's the return of the uncanny X-Men. The even uncannier Ben Vost checks it out.



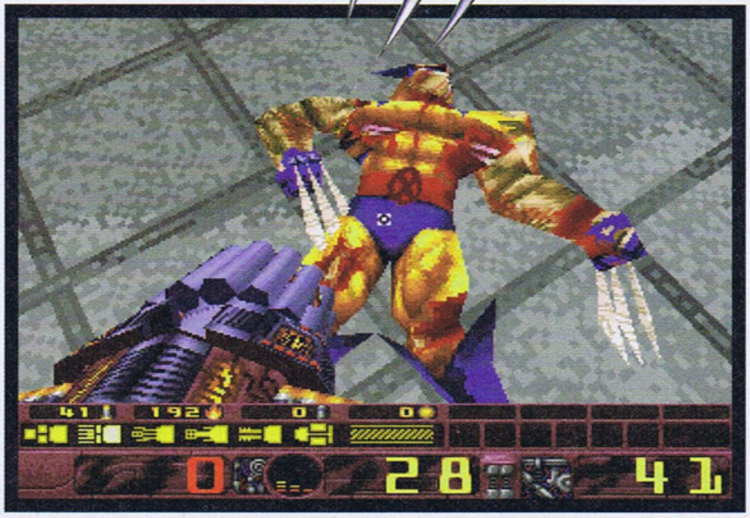
Choose your weapon and try to pick off the clones.

They say that if something's worth doing, it's worth doing well, and the idea of an X-Men total conversion for *Quake* certainly sounds appealing. On first glance, the team behind the conversion, WizardWorks, have done a good job of bringing everyone's favourite mutants to the small screen, but I have to say that it's not my most exciting *Quake* experience yet.



Whereas *Malice* attempted to put something of a storyline into *Quake*, and really was a total conversion in the sense that the whole game dynamic was changed (no armour, being able to parachute and the like), *X-Men* isn't as interesting. Sure, the characters all look very nice. WizardWorks have really gone to extremes to show realism, down to the fact that Wolverine just keeps getting back up (thanks to his super-fast healing, non-fanboy) and the X-clone characters all get progressively more bloody as you shoot them up, but this tends to slow the game down, right when you need it to be fast. *X-Men* has really been created for *GLQuake* (not available on the Amiga) and it shows.

> "... once you've roasted your victim they just stand there, charred and skeletal, and then you can shoot them..."



So you think you've killed him, right? He'll be back, trust me.



This little chap's called Portal. He gets you into the adventure.

Sounds familiar

The game isn't even a total conversion as the sounds are from the original *Quake*, from the health pickups to the sound of the grenade launcher firing. There are new sounds for the *X-Men*, but that's all. However, the graphics are all new with bold metals and little shadow.

Unfortunately, even with new costumes on, the *X-Men* you're fighting aren't any more interesting than the grunts and ogres you face in the first levels of *Quake*. The only difference is that you need to continually pump rounds into the *X-Men* before they keel over and moan.

Facing each *X-Man* (or *X-Lady*; there are some you know), is supposed to be different each time. For example, some are immune to certain weapons. In reality, you just keep your distance the whole time, trying out different weapons until you find the one that's most effective. You then blast with that every time you encounter the hero in question after your first battle.





Once you reach the end of the first level you get the first bit of the gun and this screen-covering hologram.





They're all here: Wolverine, Bishop, Gambit, Psylocke and more...

Not only that, but where you were constantly surprised by the baddies in *Quake*, these ones are pretty predictable. WizardWorks have painted themselves into a corner by only using bright areas, but even so, just leaving the heroes on platforms waiting for you to pick them off? That's about as exciting as playing that reader game where you have to guess a number between one and 100.



Death can easily come from above, too.

The plot...

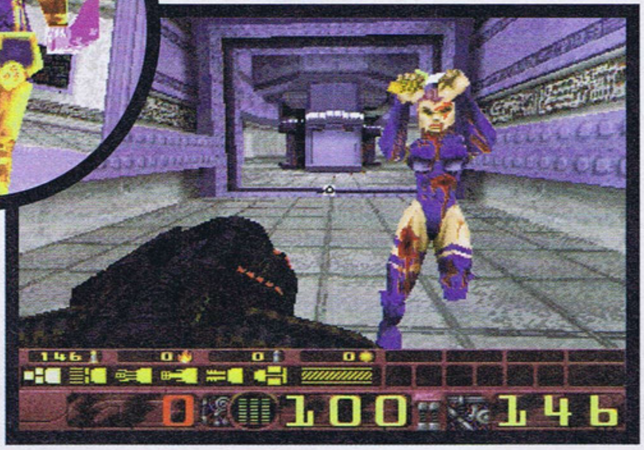
Talking of fighting the *X-Men*, why are you actually doing that? Surely you can't be the villain of the piece? Well, no. There's an introductory couple of pages in the manual, which pretty much just replicates the outside of the box, describing how the evil Apocalypse has cloned the original X-Men in order to take over the world. The not-quite-so-evil-but-pretty-bad-really Magneto has strapped you to a table and given you weapons for arms and sent you out to get Apocalypse and find out who he's working with.

I know, I know, it's a plot worthy of an X-Men strip, but even so, it doesn't work that well in the game. After you complete tasks on each level, you receive a telepathic hologram (whatever one of those is – it just looks like Magneto's face, covered with static and hanging in the air to me) which gives you advice and points you to a part of a huge weapon which is the only thing that can kill Apocalypse. If it's such a great weapon then why is it in his fortress in the first place?



Up in arms

Anyway, the game's still no fun, especially as it takes an age for your weapon arms to morph from one weapon to the next. The guided rockets are nice though, and the flamethrower's groovy – once you've roasted your victim they just stand there, charred and skeletal, and then you can shoot them and they'll explode, or you can punch them to bits. However, all the weapons are just *Quake* analogues. There's nothing new.





There are two good things I can say about this game. One is that, unlike *Malice*, there's some atmosphere in the music. The other is that playing *X-Men* in multiplayer mode is a lot more fun as you can all pick an X-Man or woman that you like and have a go. However, to play it this way everyone is going to need a copy of *X-Men*, which cuts down the number of possible deathmatchers you'll come up against.

All in all, this isn't the best *Quake* conversion I've seen. If you haven't already got *Malice* then get that or the *Quake Resurrection Pack* instead. If you've got them both and you're still desperate for more *Quake* stuff, we've got a regular selection of some of the world's best free levels on our CD every issue. AF

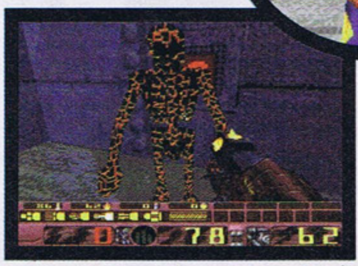
DEVELOPED BY: WizardWorks
SUPPLIED BY: Alive Mediasoft (01623) 467579
PRICE: £18.99
RELEASE DATE: Out now

Pros and Cons

- + Good music.
- + Lots of fun playing in a deathmatch.
- − Sloooow.
- − No atmosphere and boring opponents.

OVERALL VERDICT:
Only get this if you're a huge X-Men fan or a Quake completist.

60%







If you use the flamethrower on a bad guy, this is the result. You can then punch the clone satisfyingly to make it explode.

Andy Smith is missing, so it's down to Nick Veitch to introduce this month's bundles of fun that are, of course, the...

Reader Games

Well, you were probably expecting Mr. Smith to be giving you the usual incisive comments on your games this month, but you're in for a surprise. Andy has disappeared, and because we can't be bothered searching the local gutters, we decided it would be easier to get someone else to do his usual "work".

As such, I myself am taking a stint at the Reader Games section, and I can see I got here just in time. Andy was a little too easy on you in my opinion, so it's going to take something really impressive to extract the fifty quid prize from me.

Oh, and before we continue, you might like to note that James Chapman has updated the rather wonderful *WBPet* (*AF109*), which now has a "Full Monty" option on it.

By the way James, the 20p came in useful. Cheers!

£50 AF Winner!

AMIWALE

The author of this game might be familiar to those of you who keep up with the games on Aminet, or who regularly read our PD Select pages, because he also authored the vertically scrolling *Cross Country* game, featuring a cute fox trying to save the world from an evil clown (*AF115*).

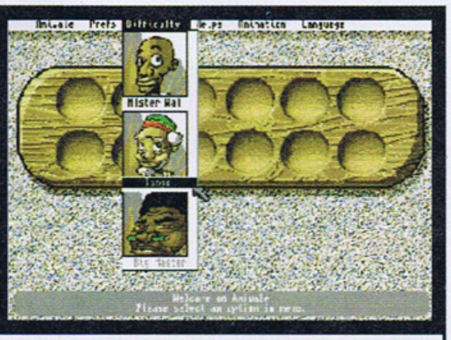
If you remember that game, it will come as no surprise to you that this title also includes some very nice graphics, although it is in a completely different genre.

This is a puzzle game based on an ancient African tribal game, whose name I can't quite remember. The rules seem quite complicated at first, but they aren't really. Two players start off with a number of stones, placed in a row of six holes in front of them. They then take it in turns to select a hole, take all the stones out and proceed in an anticlockwise direction, putting one stone in each.

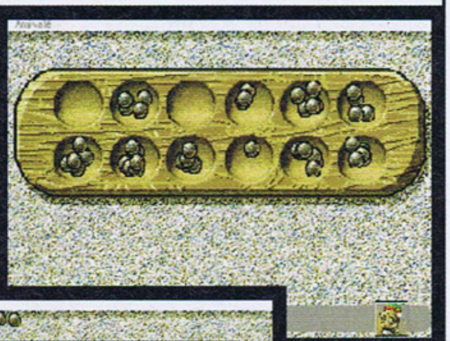
If they have ended up at one of their opponents holes when they run out of stones, and there are two or three stones in it, they get to keep all the stones. The person with the most stones at the end wins.

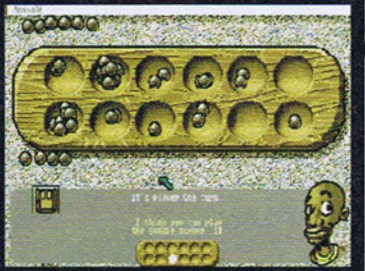
It sounds fairly easy but there are many different tricks and tactics to be mastered before you'll be able to beat even the lowliest computer opponent.

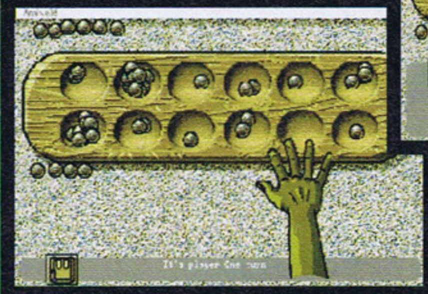
Although this is a very simple game, it is really well executed and I have no hesitation in awarding this month's fifty quid to old Dan Labriet. Well done.



Choose your opponent with care – they can be pretty cunning and will easily win when you're starting out.







You'll have to plan your moves cleverly to maximise your stones. Fortunately, help is at hand (left).

AUTHOR: Daniel Labriet
LANGUAGE: Amos
VERDICT: Lovely graphics and well executed. A worthy winner for this month.

READER WARRANT

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1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.

The address to send your stuff into is:
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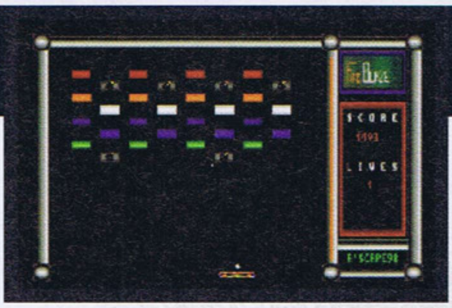
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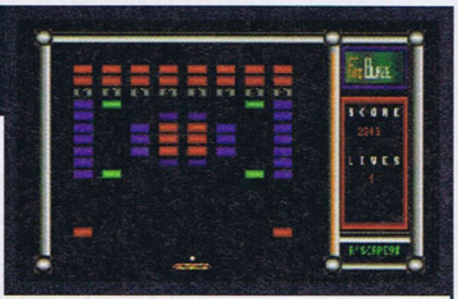
ON THE CD

Please note that due to circumstances conspiring against us, we were unable to include this month's collection of your efforts on our CD. Next month, all the games from this month will be included too.

ON THIS MONTH'S CD

FIREBLAZER





It works, but it's hardly original...

Why oh why oh why do people insist on doing endless clones of *Breakout*? In its day it was state of the art, but unfortunately so was the Binatone TV games system. We don't really need any more *Breakout*/*Arkanoid* clones, unless they add something new to the genre.

There have been a few titles, like *Maniac Ball* and *Smash Out*, which have added greater depth and more gameplay to the ageing classic, but this isn't one of them.

It is playable enough, except for a few bugs. The first is that every so often the ball will just travel through a brick without destroying it. The second is that the ball will sometimes fly off at a random angle. Hmm, I think a bit more bug testing might have been useful here, Martin.

The other annoying thing is the speed of the game. It plays at different rates on different machines. Martin, using a delay loop is not a good idea in these days of accelerators. You're much better off checking the system clock and counting the ticks (which occur at .02 second intervals, whatever the actual speed of your computer's processor).

These foibles aside, the main problem with this game is the thing I mentioned first – a stunning lack of originality.

I don't want to be too harsh, though. If this is one of your first attempts then it's a very good one, at least technically. However, there's no point reinventing *Breakout* unless your next version is going to have something extra.

AUTHOR: Martin Whitworth
LANGUAGE: Blitz Basic
VERDICT: Please, please, please, if you are going to do your own take on some arcade classic, at least add some original features.

FAILED NEGOTIATIONS



Sad graphics, but a compelling game.

This is another example of a game which isn't terribly original, but has things added to make it more interesting. At least it's sufficiently different from the originals to make a difference.

On the face of it, it might not have a lot going for it. The sound effects are minimal, the music is cheesy and the graphics, well, I can't really bring myself to start describing how terrible they are (sorry Andrew).

The game itself is basically a mouse driven duck shoot, with the age old proviso that you can only shoot the bad guys. *Virtua Cop* it isn't.

And yet it has a lot going for it. There are four types of weapons, which come supplied with varying amounts of ammunition and cause various amounts of damage.

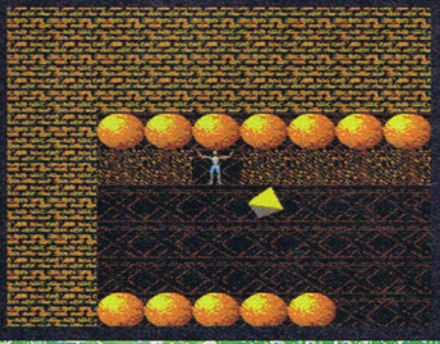
Cunningly, these aren't just thrown into the game, but are actually made essential to it. You really need to switch to the sniper rifle at the end of level one, otherwise you aren't going to be able to shoot past the hostage at the bad guy. You really need the machine gun at the Harbour level, just to keep on top of the "mob", and the rocket launcher is essential to dispatch the armoured car.

The levels are all different too, rather than being just a slightly different building with people popping up at the same old windows. Obviously, as you learn the levels you'll get to know where people pop up, but there isn't really any way around that. There are nice touches like the forklift truck and, well, I won't spoil it for you.

With only five levels it may have a short lifespan, but probably not as short as the graphically excellent but very predictable *Judge Dredd* game on the PlayStation.

AUTHOR: Thomas, Andrew and John Venables
LANGUAGE: Amos Pro
VERDICT: It looks terrible, it sounds bad, it almost won £50.

ABANDONED MINES

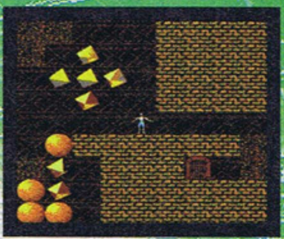


Another unoriginal idea executed in an interesting way, *Abandoned Mines* is quite simply a *BoulderDash* clone. It is a little different though, and plenty of time has been spent on the animation of the central character.

The character, the boulders and the gems are all fairly big, which has the effect of both making the game a lot harder as you can't see the greater extent of the rocks and gems around you, as well as making it feel a bit more like an adventure.

The levels themselves are quite cunning and many parts will have you scratching your head for quite a while. There are no time limits here. You progress through the game by collecting all the gems on a level (and you aren't even told how many there are) and then making a dash for the exit, if you can find it.

It's BoulderDash, only with much more elaborate graphics, a level editor and some cunning tricks.



Success rewards you with the password to the next level, of which there are many, and they do get much harder.

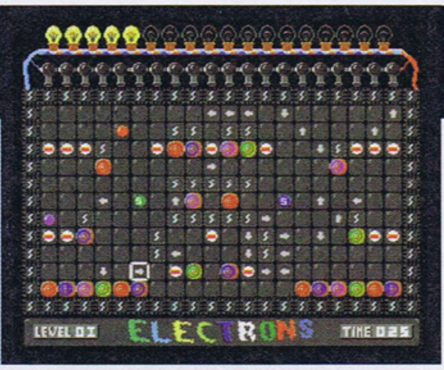
This is a very competent game, but apart from being prettier than most of the other *BoulderDash*-type efforts, it doesn't have anything which makes it truly unique.

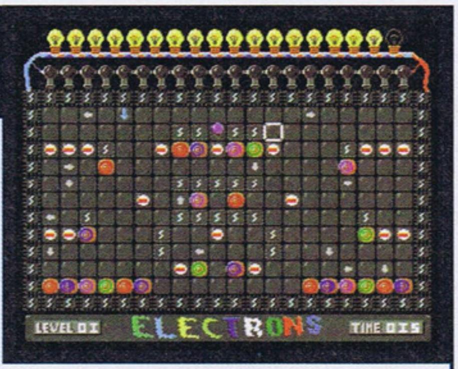
I think the lack of any kind of clock, even just so you can challenge yourself, is a mistake. Having said that, it was also a strong contender for the prize, which it may well have won any other month.

AUTHOR: John Day
LANGUAGE: Unknown
VERDICT: Very slick and playable, but perhaps it could be made more different.

Continued overleaf ➡

ELECTRONS



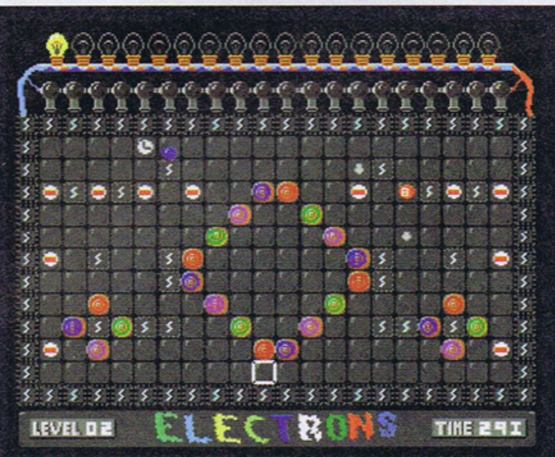


Guide the coloured electrons to the right connections and you'll be rewarded by your bulbs lighting up.

This is more like it. This game is pretty original, although it obviously owes something to the likes of *Reflektor* and *Timekeepers*. The aim is quite simple – you are in some sort of Electron factory and you have to guide the coloured electrons to their respective holes (red electrons go to red holes, etc.) by placing arrows in front of them.

This all seems simple enough, but there are some rather evil obstacles in the way. Oh, and you're also playing against the clock.

This is a fine example of taking a few ideas from other games and putting them all together to make a new game. This is what commercial game developers seem to do all the time. It's also what Hollywood does, come to that. There are very few truly original games. I mean, *Quake* is essentially that old ZX80 classic, *3D-Monster Maze*, only with better graphics, *Civilisation* is just a reworking of the old Unix classic, *Empire*, and so on.



Oo-er. What sort of electrical circuit is this then? It isn't a PIC circuit, anyway.

In this case, the two different elements actually work well together. Although the game owes nothing to the laws of physics, it is still pretty addictive.

I think it's a little too difficult, though. Even at the slowest speed there are electrons whizzing around all over the place before you know what's happening. Why not use other methods to set the skill level? As well as a slower speed, how about starting off with fewer colours, or fewer places for the electrons to emerge from?

I also think the control system needs some work. The arrows currently flow in the direction the cursor was travelling before you reached the square and pressed space. This means that not only do you have to zoom around the screen to get to the right square, you have to approach it from the right direction too. Perhaps with the spacebar just toggling the direction of the arrow, playing the game wouldn't be so frustrating.

This is only a demo version of the full game so I couldn't really tell how the stages progress, but it is certainly challenging.

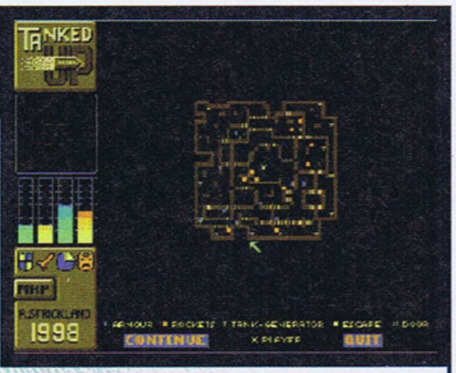
To buy the full game for only £2.50, contact Kevin Heywood at: 18 Sinclair Avenue, Banbury, Oxon, OX16 7DW. The demo will be on our cover CD next month. Honest...

AUTHOR: Kevin Heywood
LANGUAGE: Blitz Basic
VERDICT: A competent, original game, but it's far too difficult.

TANKED UP



Another firefight. Yesterday. In the hatchery. Be careful not to let too many tanks gang up on you.



The map (above) is crucial for planning your strategy.

Rob Strickland's game isn't a terribly novel concept. Rather reminiscent of the old *Combat* games on the Atari VCS, and later, *Firepower* on the Amiga, the aim is to drive a tank around a maze and blow up any other tanks you might meet, picking up extra rockets and armour on the way.

The opposing tanks are all computer controlled, and depending on the skill level, you could have six of them on screen attacking you at the same time. In some missions you have to destroy a certain number of enemy tanks, whereas in others you simply have to escape to the exit.

There is a certain amount of strategy involved in the game, as well as pure combat. You have to be careful to only try to encounter enemy tanks in ones or twos as a group will destroy you in no time, no matter how much armour you have. Tanks only pop up at certain locations on each map, so you know when you're likely to run into danger. There's even a level editor included if you get bored of the various cunning levels which are included.



There are probably things which could be added to the game, certainly to add a bit of variety. How about some sort of hyperspace function which would get you out of trouble, or a super weapon, like a smart bomb? Even just a different weapon, like a flame thrower, would be welcome. Perhaps there could be different types of enemy tanks too, and one-way doors so you (or the enemy) could escape.

The thing which is missing the most is some sort of structure to the game. Although it is fun to try to beat your best scores on particular levels, it might be better to have a "campaign mode" where you have to play a few of the levels in sequence. Just a thought.



AUTHOR: Rob Strickland
LANGUAGE: Blitz Basic
VERDICT: Could have a bit more variety, but it plays well and looks good.

GameBusters

Multiplayer Quake on the Internet part 3

Gareth Murfin gives you some hints and cheats to help you survive the deadly world of the online Quake deathmatch...

ON THIS MONTH'S CD AFCD32:-In_the_Mag-/Quake

Without a doubt, the best feature of *Quake* is the multiplayer mode. This is where people from all over the world link up on a *Quake* server and compete in an all out battle to see who can get the most frags (kills).

The rules are simple: frag as many people as possible. When you frag someone you get one point added to your score on the rankings and if you frag yourself you lose a point. A point is not deducted if someone else frags you. When the round is over the person with the most points wins and you all proceed to the next round.

The amount of times you win a round isn't recorded anywhere so it's a matter of simply remembering your own personal best.

> "It's this type of trivial thing which can get you killed because someone shoots you while you're typing."

There are teams of players who work together, called 'Clans', and their name will usually be proceeded by the name of their clan, so '[Amiga]Gaz' would belong to the Amiga clan.

Quake has its own etiquette, like every other aspect of the Internet, and you must behave in a certain way or you may be singled out and hunted by the rest.

Hiding in corners and sniping is called camping. If you do this then you won't be very popular because it's a wimp's way of fragging. Also, don't accuse anyone of cheating because you'll look pretty silly as no cheats work in multiplayer mode.

Modems and speed

Amiga, Mac and PC users can compete in the same deathmatch equally, but winning is down to a combination of skill and modem speed. You'll need at least a 28.8K modem to play *Quake* on the net and you'll still probably find your connection is lagged compared to the masses of university players with super fast connections.

To check the speed of your connection, open the console and type 'ping'. This will give you a list of users, each with a number next to their name. That number represents the speed of their Internet connection and the higher the number the slower the connection is. If your number is above 300 then you're lagging, which means the information is taking too long to get from the server to your modem. This means that people who aren't lagging can see you before you see them, which obviously puts you at a disadvantage. If the number is above 1,000 then you may as well disconnect because it's too slow to play properly.

To speed up your connection you can do a number of things. Firstly, you should make sure your TCP/IP preferences are set up properly in *Miami* or *AmiTCP*. As a general rule you should set the baud rate higher than the speed of your modem. For example, for a 33.6K modem set the preferences to around 57,600.

You should also make sure you're using a fast serial device. The standard Workbench Serial.device is good but it's possible to achieve better speeds with a new device such as an 8n1.device.

One thing to realise is that certain levels are more prone to lag than others. For example, 'The House of Chton' should be avoided at all costs. If you really want speed then you could host your own *Quake* server and let others connect to you. This is called a 'listen' server because



Some levels are too laggy to play.

Camping is socially unacceptable in Quake.



you can still play the game while others connect to you. With a 'dedicated' server you can't play the game while hosting it.

To start a Listen Server you invoke *Quake* with the '-listen' command line parameter or use the multiplayer menu in the game. Then others connect to you using your IP like any normal *Quake* server.

As described last month, bindings can help you do a lot better by providing lots of functions quickly and easily. This is extremely useful in multiplayer mode because the faster you can do things, the more frags you will get.

The first thing to do is make the console appear faster as it can get you killed in multiplayer mode because it scrolls up so slowly. In the console, type 'scr_conspeed 3000' as this will make the console appear instantaneously.

Witty banter

There are times when you'll want to say a standard reply to something. For instance, if someone is camping you may want to say 'Stop Camping!' or if you've just fragged someone you might want to say 'hehehe'. It's this type of trivial thing which can get you killed because someone shoots you while you're typing. To solve this, you can bind the words to a single key, like 'Bind H "Hehehe…"'.

Quake scripts can also be used for fun and it's possible to use symbols in your name to help it stand out or even to have an animated name or clothes. To see how to get symbols in your name, copy the script symbols.scr from the CD to ID1/ in the Quake directory on your hard drive. Now open the console and type 'exec symbols.scr'. You will see lots of symbols and coloured letters appear, each with a number next to them.

To scroll up and down the console use the 'Pg up' and 'Pg Dn' keys. Pick out the characters that you want for your name and make a note of their number. For example, 'AF' in Gold would be '193, 198'. Now load up symbols.scr in a text editor and find the numbers of the characters for your name. You must now cut and paste the characters which represent the symbols you want. Paste them alongside each other and 'cut' the final name so it's in the clipboard.

Now load up config.cfg from the ID1 directory and look for '_cl_name'. Next to this you will see your name enclosed in speech marks, which will probably be "Player". Delete the word Player, leaving the two speech marks, and paste your name from the clipboard. Save the config.cfg file and load *Quake*. Start a one-player game, open the console, type 'name' and *Quake* will echo your name to you.



Which name stands out the most?

You have your name done and as soon as you join a *Quake* server it will stand out much more in the rankings or when you frag someone as most people have boring silver names.

Snazzy outfits

Animated clothing and names are other ways to make you stand out and these are achieved with very simple *Quake* scripts which issue console commands one after the other. In multiplayer you can change your name by typing 'name <newname>' and you can change your colours by typing 'colour <new colour 1> <new colour 2>' where colour 1 is the colour of your shirt and colour 2 is your trousers.

The colours range from zero to 13. With these commands it is possible to make scripts which animate your name and clothes.

Script A (right) would animate your name to say 'Quake is Cool!'. The script assumes your name in *Quake* is 'Amiga' and so returns to your original name at the end of the script. The 'wait' commands slow it down to a readable rate and the semicolons separate the commands. Script B would animate your clothes so you get a purple shirt and white trousers, then a white shirt and green trousers, then a red shirt and white trousers. This script assumes that your clothes are a white shirt and white trousers and returns to your original colours at the end of the script. You can make your own scripts to do any combination of names or colours that you like and you can adjust the frame rate of the animation by adding more waits (slower) or less waits (faster).



Contrary to popular belief, Amiga users can do very well in multiplayer Quake.

These scripts now need to be bound to a key and you can then press that key whenever you want to run them. The best time for this is during the 'rankings' summary at the end of each round because everyone will be watching.

That's all from me. Hopefully we'll see the *Quake* servers being flooded with more and more Amiga users as time goes on, and hopefully ClickBOOM will eventually come to their senses with regard to releasing *Amiga Quake PPC*. AF

GOOD QUAKE SERVERS

quake.enta.net – **An unmodified server which plays normal deathmatch levels with fast UK access.**

quake.globalnet.co.uk – **Plays the episode levels and is fast.**

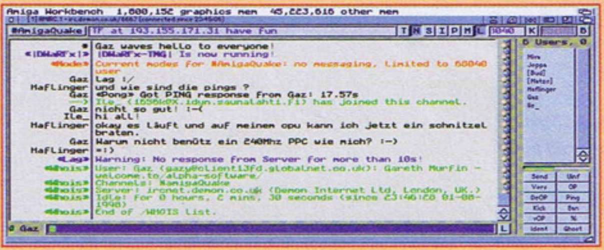
quake.demon.co.uk – **Modified *Quake* with a few weapon modifications (no extra files needed).**

quake.dircon.co.uk – **Plays the episode levels and is very fast due to fewer users.**

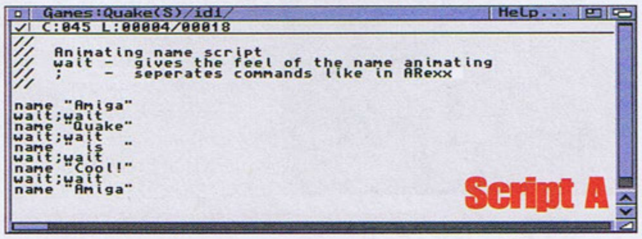
ares.clara.net – **Modified *Quake* with magical runes, etc, and is very fast (no extra files needed).**

AMIGA QUAKE IRC CHANNEL

There is also an IRC channel devoted to *Amiga Quake*. It provides help and general *Quake* and Amiga chat. There will usually be a *Quake* server in the topic which is running on an Amiga and this allows you to fight against fellow Amiga users. The address for the channel is: irc.demon.co.uk, #AmigaQuake, Port 6667.



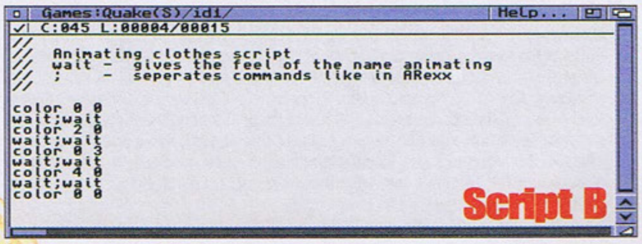
Don't worry, they do speak English as well!



```
Games:Quake(S)/id1/                    Help...
C:045 L:00004/00018
//
//   Animating name script
//   wait -  gives the feel of the name animating
//   ;    -  seperates commands like in ARexx
//

name "Amiga"
wait;wait
name "Quake"
wait;wait
name " is "
wait;wait
name "Cool!"
wait;wait
name "Amiga"
```

Script A



```
Games:Quake(S)/id1/                    Help...
C:045 L:00004/00015
//
//   Animating clothes script
//   wait -  gives the feel of the name animating
//   ;    -  seperates commands like in ARexx
//

color 0 0
wait;wait
color 2 0
wait;wait
color 0 3
wait;wait
color 4 0
wait;wait
color 0 0
```

Script B

Reader Reviews

Doom Ports

Although many Amiga users are now Quaking, Gareth Murfin still enjoys blasting ogres into little red chunks with Doom...

Your Reviews

This is your chance to give us your opinion on any Amiga games. Write a fair and accurate review of about 750 words on the best or worst software you've played and you could see your work appear in AF!

We'll also need a good-quality passport photograph of you. Send your reviews to: Reader Game Reviews • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW

On December 24th, 1997, news from id Software shocked the gaming world as they announced that the source code to probably one of the most popular computer games ever had been released for free on the Internet.

Hundreds of coders from all round the world rushed to download the source code and discover the secrets behind debatably the most enjoyable creation in gaming history.

With the source code in C it was inevitable that an Amiga port of *Doom* would appear within the week. However, nobody could have predicted the haste with which the ports would appear and the frequency of their updates. Soon Aminet was heaving with Amiga *Doom* ports, all boasting they were the best. It wasn't until I downloaded a selection (*ADoom*, *Amidoom*, *PSIdoom*, *DoomAttack* and *Amiga Doom*) and sifted through them that I realised just how good these conversions were. *ADoom* by Peter McGavin was clearly the best port, running at a tremendously fast pace, full-screen, on my Apollo 1260/50.

> **"ADoom by Peter McGavin was clearly the best port, running at a tremendously fast pace, full-screen..."**



Because Doom is much simpler than Quake, it's easier to run it full-screen...





... but even if you have a slow machine you can still play it, albeit in a smaller window.





The Shareware version is all very well but you'll need a commercial version to get the best from all the levels available on the net.



ADoom

ADoom v1.2 also supports joypads, Internet link up, music and perfect sound, without any noticeable slow down. As well as being 100% OS friendly (multi-tasking) *ADoom* can also be run in any screen mode.

OXYPatcher fans will be pleased to know that it speeds up *Doom* by about five times on the Apollo 1260, which was already no slouch.

With *ADoom* installed on your hard drive, all you need now is a WAD file. A WAD file is a special *Doom* file which contains all the data for the game itself. *ADoom* can use most PC WADs, which is a great plus point because there are numerous Shareware WADs on the net for your perusal. Alternatively, if you can get hold of a PC WAD from a CD-ROM then you'll be able to copy them across and play them instantly.

Everyone's Doomed!

Once up and running, you'll be hooked for hours as the thrill of running down corridors and blasting horrific beasts with a shotgun is too tempting to withstand.

Install *ADoom*, turn the lights down low and prepare yourself for the most terrifying night in Amiga gaming history.



Take that, mate! Doom offers some excellent gaming for everyone.

SUPPLIED BY: The Internet for the PD version and any Amiga dealer for the commercial version.

PRICE: Varies.

REQUIREMENTS: The faster your Amiga, the better.

OVERALL VERDICT: A perfect conversion of Doom, this is a must for your gaming collection.

95%

Ben's Verdict

Although people are still wowed over Quake, iD's first corridor game is probably more suited to the average Amiga. Getting one of the many variants of it from your favourite Amiga dealer opens up a whole new world of add-ons available on our CD and elsewhere. As a game, it's hard to beat Doom for its fluidity and pace, although Genetic Species is more impressive graphically and in terms of innovative gameplay.

Personally, although I'm mired in Quake right now, I play Doom pretty often and still think it rocks. Now if only Amiga games writers could come up with something so revolutionary for the Amiga, instead of doing substandard ports, clones and rip-offs of established gaming styles, I'd be even happier.

EYELINE

Bringing you the latest Amiga News from Eyetech

Latest News in Brief

EZReWriter-*SLE* Introduced

Following closely on the success of the EZWriter, Eyetech has introduced the EZReWriter-*SLE* for the A1200, starting at just £279.95 for the Tower version.

The unit, which will read and write to conventional Gold CDROMs as well as CD rewritables, comes complete with MakeCD software and one CD rewritable disk.

An external version with 100W Power Supply, the EZReWriter-*SE*, is also available for just £299.95.

Award-winning CDPlus-*SE* down in price!

The Eyetech ***CDPlus-SE***, which recently came out top in a comparative Amiga Format review, has been reduced in price by up to 17.5% following recent reductions in the price of CDROM mechanisms. The 20-speed ***CDPlus-SE*** is now just **£85.95** complete with ***EZCD-SE*** interface, 40 & 44 way cables, PSU, and software, with the 32- speed version coming in at just **£98.95!**

Both units were awarded CU Amiga 'Superstar' and Amiga Format 'Gold' awards at their original prices of £99.95 and £119.95 respectively.

EZGen Low-Cost Genlock

This month sees the release of Eyetech's EZGen, low cost composite video genlock for the Amiga range priced at just £99.95.

It allows Amiga Graphics from, say, Scala MM300, to be overlaid on live video from a camcorder and the resultant signal re-recorded to videotape.

Special Promotion on 30-bit Flatbed Scanner

Buy an award-winning UMAX Scanner and Photoscope Software bundle from Eyetech before the end of October 1998, and get a fully registered copy of ArtEffect-SE 1.5 (normally £59.95) completely **FREE OF CHARGE.**

Monitors down in price

Following recent reductions in the price of monitors you can now buy a brand new 14" digital monitor, complete with internal A1200 Scandoubler for under £145.

Please see the panel on page 2 of this advertisement for further details.

Amiga Magic Upgrade Packs
now available (Limited quantities only)

The ideal way to bring your Commodore A1200 up-to-date:

- 3.1 Kickstart ROMs
- 3.1 Workbench (6 disks) & manuals
- Wordworth 4.5 SE
- Turbocalc 3.5
- Datastore 1.1
- Photogenics 1.25E
- Personal Paint 6.4
- Organiser 1.1
- Pinball Mania & Whizz Games
- Magic Pack Software Manuals

.... and all for just £49.95!!

EYELINE BACK ISSUES

- Monitors/Scandoublers/Flickerfixers ☐
- EZPC-Tower System ☐
- EZWriter/EZRewriter CD Writers ☐
- Siamese System RTG2.1 & 2.5 Upgrades ☐
- CDPlus-*SE* Award-winning A1200 CDROMs ☐

If you would like copies of any of the features covered in previous issues of Eyeline - please send a copy of this coupon together with a stamped addressed envelope to:

Eyetech Group Ltd, The Old Bank, 12 West Green, Stokesley, N. Yorks TS9 5BB

FOUR DIFFERENT IDE INTERFACES BRING LOW COST, RELIABLE EXPANSION TO EVERY A1200

When the Commodore engineers developed the A1200 in the early 1990's, they had the foresight to include an IDE interface so that (relatively) low cost PC notebooks hard drives could easily be fitted. However, back then no-one ever envisaged that, six years on, A1200 owners would want to attach multiple hard drives, CDROMs, removable cartridge drives - and even CD burners such as the EZWriter - to their machines.

What Commodore left out of your A1200

However the A1200's built-in IDE interface is minimalist in the extreme. As the Commodore design engineers only ever envisaged factory-fitted 2.5" internal hard drives being used in the A1200 - and then connected to the motherboard by a ribbon cable no longer than 2cm, they saved costs by wiring the IDE connector directly to the A1200's main data bus, rather than via buffered line driver chips used by virtually every other computer (and as required by the relevant IDE/ATA standards).

All four IDE interfaces supplied by Eyetech - the EZCD-SE, EZCD-MK2, the IDE-Flyer and the IDE-Express - put back the bits that Commodore left out - and more. All three interfaces provide:

- the 'muscle' to drive the voltages on the wires of the CDROM/HD data cable from 0v to 5v and back at up to 3 million times per second (or up to 16MB/s for the IDE-Flyer)
- a 'gateway' between the A1200 data bus and the IDE/ATAPI peripherals so that data is sent and received on the cable only when needed (and not continuously - whether relevant to the IDE/ATAPI devices or not - as with the standard A1200 IDE connector).
- the isolation of the Amiga custom chips from the IDE/ATAPI devices and cables to help protect your Amiga's custom chips from damage caused by a failure of components on the IDE chain.

In addition, all three interfaces allow you to add up to 4 IDE/ATAPI devices to your A1200 by creating two separate IDE channels, each capable of supporting a master and (compatible) slave device.

Why four Interfaces?

In any computer the internal timing mechanism is the most critical area for overall system stability. Any mismatch between the timing signals generated by the computer, and those expected by any attached peripheral - such as a hard drive or CDROM - can result in data corruption, or just failure to operate at all.

As you might expect, the faster the system and peripherals, the tighter are the tolerances on the timing signals of the A1200 and its accessories. In fact, for highly specified systems, the 'normal' data bus buffering (eg in the EZCD-SE interface supplied by Eyetech, and the buffered interfaces supplied by most other Amiga dealers) has to be supplemented by 'active pull-up' technology and extended to all interface signals - data and control. This is how the EZCD-Mk4 works.

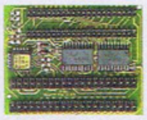
Finally although the EZCD-MK4 interface provides more than sufficient performance for most people, if you really want to get the absolute maximum performance from your IDE peripherals you will need to bypass the A1200's internal IDE port completely and start from scratch. This is exactly what the Elbox IDE-Flyer and the IDE-Express do.

Which Interface is best for me?

At the last count there were around 12 different A1200 motherboard revisions produced by Commodore, and many variations within these due to chip level revisions. Couple this to the different mix and variety of peripherals that individual A1200 users fit to their machines and you have nearly as many different A1200 systems as there are users. All this means is that it is not possible to be definitive about which interface is going to the the most suitable for your system. However, Eyetech's unique compatibility promise allows you the full purchase price back against your interface (less carriage) against a more highly specified interface - should you need it - within 30 days of purchase. As a general guideline you should choose the interface for your system as follows:

Interface	Price	Suitability
EZCD-SE	£24.95	030/40 Accelerator (or slower/none)
EZCD-Mk2	£38.95	030/50, 040/xx, 060/xx
IDE-Flyer	£59.95	040/xx, 060/xx, UDMA hard drive & 24speed+ CDROM
IDE-Express	£59.95	040/xx, 060/xx, UDMA hard drive & 24speed+ CDROM

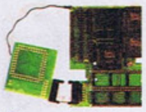
Eyetech EZCD-SE



I feel the need - the need for speed

If you really want to have the best possible performance then you need the IDE-Express or Elbox IDE-Flyer - in Amiga Format's tests it boosted performance of some hard drives by up to 600% - they rated the product at 98%. But ..... if you do decide to go this way you really need to make sure that the rest of your system is up to the job as well - otherwise you will have wasted your money. Before ordering IDE-Express or IDE-Flyer, you should make sure that:

- Your A1200 is in a tower, with an adequate power supply (over 150W).
- You have a high-end accelerator capable of making use of all the data you throw at it.
- If you have a Commodore-manufactured A1200 with a revision 2B or 1.D.4 motherboard you have had the manufacturing timing faults corrected. (We can undertake this work for a fixed charge of £30).
- You have a modern (under 1 year old) 3.5" hard drive and CDROM capable of supporting PIO Mode 4.
- You feel confident about installing the IDE-Flyer. This involves some aptitude in DIY electronics, although no soldering is required. The IDE-Express is easier to fit but has a slightly lower performance than the IDE-Flyer.
- You are using application programs which will benefit from the faster data transfer.



Elbox IDE-Flyer

The IDE-Flyer also allows hard drives over 4.3GB (the largest supported by the ROM-based FastFileSystem) to be used by 'partitioning' these drives into virtual drives each of less than 4.3GB.

EZWriter brings affordable CD production to every A1200

Internal CD Writers and Software for A1200 Tower Systems and A4000's from under £250. External units for under £270.

I thought CD Writers were expensive specialist items?

'Burning' a gold CD was considered a specialist and expensive process on any platform just a few months ago. However, as the demand for cost effective CD writers (on the PC) has risen, the price of the writer mechanisms (which also function as conventional CDROMs) has fallen dramatically. This, coupled with the release of MakeCD CD writing software, has allowed us to introduce low-cost, high quality, EZWriter systems for the Amiga.

EZWriter Gold



SCSI or IDE?

Although the first CD writers to be made were SCSI devices, this was largely for historical rather than performance reasons. CD writers were regarded as tools for specialists, and those specialists tended to have SCSI-equipped computers, whether on MAC, PC or Amiga platforms. But SCSI cards are unnecessarily expensive, particularly for CD writers which have quite low data rate demands - as low as 150 KB/s. These data rates can easily be handled by the IDE port (which typically transfers around 1.5 MB/s or greater) of a relatively basic A1200 with, say, just an 030/33+8MB accelerator.

In all cases you will also need a buffered interface, cables and ATAPI driver software. If you do not have these already we can supply cables, ATAPI software and ***EZCD-SE*** buffered interface for the special price of £20 - or £30 with ***EZCD-MK 2*** interface plus ***EZ-IDE*** software - at the time of purchase of your ***EZWriter*** system.

EZWriter Options

Option	Price
EZWriter Internal for A4000 or A1200 Tower	£249.95
EZWriter-SE External A1200 unit with separate 100w PSU	£269.95
EZWriter-Gold External A1200 unit with integral 40w PSU and Gold Audio-Out connectors	£299.95
EZWriter-MT Mini-Tower-cased unit with 230w PSU which can house an additional HD/Zip/LS120/CDROM ***and*** power your A1200	£299.95
EZWriter-FT Plus EZTower, 230w PSU, CDWriter, PC k/bd & k/bd adapter	£379.95

Eyetech Amiga Parts & Price Index November 1998 - 44 (0)1642-713-185 - 07000 4 AMIGA

Interfaces and Adapters: EZ-Key & DIY Tower Components

ADPT-EZKY	Amiga/PC k/b -> A1200 kbd ribbon cable	36.95
ADPT-EZKY-A4K	A1200 EZKey/6p->5p adptr/A4000 kbd bundle	69.95
ADPT-EZKY-W95	Amiga/PC k/b->A1200 rib cab+Win95 kbd	49.95
ADPT-EZK2	Mk 2 Amiga/PC k/b -> A1200 kbd direct connect	28.95
ADPT-EZK2-A4K	A1200 EZKey MK2/6p -> 5p adptr/A4000 kbd bdle	58.95
ADPT-EZK2-W95	Mk2 Amiga/PC k/b->A1200 rib cab+Win95 kbd	38.95
ADPT-HD-2/3	2.5"/44way -> 3.5"/40w+4w & mtg bracket	11.95
ADPT-HD-3/5	3.5" Zip/SyQuest/FDD/HD brkt/pl ->5" bay	5.95
ADPT-KBD-5P6P	Amiga/PC k/b adapter 5p din-F -> 6p m/d-M	5.95
ADPT-KBD-6P5P	Amiga/PC kbd adapter 6p mindin-F ->5pd-M	5.95
CAB-KBD-MF	5p DIN M - 5p DIN F k/b ex cable 1.2m	7.95
ADPT-DF0-FP	Tower faceplate adapter for A1200 int FD	6.95
ADPT-DF0-TWR	34-34 way cable and faceplate for DF0	12.95

Interfaces and Adapters: A1200 Ethernet, SCSI

ADPT-ETH-BNCT	BNC T-piece 2xM + 1xF	4.95
ADPT-ETH-TERM	Ethernet BNC coax terminator 50R	4.95
ADPT-PCM-ETH-C	PCMCIA ethernet card with Amiga/PC drivers	79.95
ADPT-PCM-ETH-H	Hydra PCMCIA ethernet card with Amiga drvrs	129.95
CAB-ETH-60C	Ethernet coax/BNC-F 60cm for Siamese	9.95
CAB-UPT-X60C	Crossed twisted pair/RJ45 for Sisys 60cm	6.95
ADPT-SCS-CSQR	Classic Squirrel PCMCIA SCSI i/f 50pCM	59.95

I/F & Adapters: Flickerfixers, Genlocks, VGA Adapters, Monitor Leads

ADPT-GLK-COMP	EZ-Gen composite video Genlock for A1200	99.95
ADPT-VGA-BV4M	BVision 4MB gfx card for A1200 (needs PPC)	169.95
ADPT-VGA-BMON	Auto Amiga/BVision m/sync monitor switch	39.95
ADPT-VGA-M2SD	EZ-VGA-Mk2 external s/doubler PLL u/gradable	69.95
ADPT-VGA-PLFF	EZ-VGA-Plus external flickerfixer 23F-15F PLL	99.95
ADPT-VGA-SDUG	SDBL2 to SD-flickerfixer u/g	50.00
ADPT-VGA-INSD	EZ-VGA internal A1200 s/doubler non-upgrad'le	54.95
ADPT-VGA-INFF	EZ-VGA- internal A1200 flickerfixer	89.95
ADPT-VGA-SESD	EZ-VGA-SE s/doubler 23F-15M Xtal not u/g	54.95
ADPT-VGA-SEFF	EZ-VGA-SE flickerfixer 23F-15M Xtal	89.95
ADPT-VGA-15M23M	VGA 15pHD-M -> 23pD-M Amiga RGB adapter	14.95
ADPT-VGA-15M9F	Adapter from 15p HD-M VGA to 9pD-F	9.95
ADPT-VGA-9M15F	Monitor adapter 9p D-F to 15p HD-M	9.95
ADPT-VGA-UNBF	Amiga 23 pin(f)-15 pin HD(f) VGA adapter	12.95
ADPT-VGA-BUF	Amiga 23pin-F to 15pinHD-F buffered adapter	16.95

I/F & Adapters - IDE/ATAPI, Serial, Parallel & Floppy Drive

INT-IDE-FLYR	Elbox 4-dev high performance buf'd A1200 IDE i/f	59.95
INT-IDE-XPRS	IDE-Express 4-dev high performance buf'd A1200 i/f	59.95
INT-12I-EZCD4	Mk4 4-dev buf IDE i/f w/AIPU w/A1200 CD s/w	38.95
INT-12I-EZCD4/C	Mk4 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs	48.95
INT-12I-EZCD4/CE	Mk4 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	58.95
INT-12I-EZCDSE	Economy 4-dev buf IDE i/f w/A1200 CD s/w	24.95
INT-12I-EZCDSE/C	Econ 4-dev buf IDE i/f w/3x40,2x44 13cm cabs	34.95
INT-12I-EZCDSE/CE	Econ 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	44.95
INT-4KI-CD4	4-device EIDE i/f for A4000 w/CDROM s/w	19.95
INT-FDD-DF0	Interface for std Sony FDD for DF0 880KB	9.95
INT-SER-PTJR	PortJunior - 460KB serial i/f for A1200	39.95

Zorro 2/3 Boards and Adapters

GFX-Z2-CV643D	C64/3D graphics card w/out f/fixer (limited stock)	149.95
ADPT-VGA-AMON	Auto Amiga/CV643D m/sync monitor switch	39.95

Cables & Cable Adapters: Audio & Mains

CAB-AUD-CD	CDROM invt'd T audio cab .6m + 2xRCA plg	9.95
CAB-AUD-MIX	RCA(phono)-M -> RCA-M+RCA-F mix lead 1.8m	6.95
CAB-AUD-2M2M	RCA(phono)-2xM -> RCA2xM stereo lead 1.8m	4.95
CAB-AUD-MJ/PH	3.5mm st minijack->2xphono-M plugs 1.2m	5.95
ADPT-AUD-RCA	RCA(phono)-M -> 2xRCA-F adapter	2.50
ADPT-AUD-RCA-G	RCA(phono)-M ->2xRCA-F gold plated adapt	3.50
CAB-IEC-1.5M	AC power cable 13A plug -> IEC skt 1.5m	2.95
CAB-IEC-4X13	AC powerstrip 1xIEC-M -> 4x13A-F mains skt	19.95
PLUG-IEC	Rewirable IEC monitor plg for PSUs/MT/DT	4.95

Cables & Cable Adapters: Serial, Modem, SCSI, Printer

CAB-SER-EX2M	DB25-M -> DB25-F RS232 extn cab 2m	7.95
CAB-SER-EX50C	DB25-M -> DB25-F RS232 extn cab 0.5m	6.95
CAB-SER-NUL2M	Null modem cable w/ D9F & D25F at each end	9.95
ADPT-SER-25F9M	25p-F to 9pM serial RS232 adapter	4.95
ADPT-SER-25M9F	25p-M to 9pF serial RS232 adapter	4.95
ADPT-SCS-50C2F1M	50pin Centronics 'T' 2x F to 1 x M SCSI adapter	14.95
ADPT-SCS-50/50CF	Centronics 50p-F to Centronics 50p-F (for Squirrel)	14.95
CAB-BT-EX10	10m BT extn cable + 2 way phone adapter	9.95
CAB-BT-MOD	FCC684/6 to BT4 modem phone lead 1m	5.95
CAB-SCS-25D/50C	SCSI cable DB25-M -> Cent50-M 1m	9.95
CAB-SCS-25D/25D	SCSI cable DB25M-DB25M mac type	9.95
CAB-SCS-50C/50C	SCSI cable Centr50M->Centr50M 1m	9.95
CAB-SCS-50H/50C	SCSI-2 cable 50h/pDM->Centr50M 1m for PPC	19.95
CAB-SCS-50H/25D	SCSI-2 cable 50h/pDM->25D-M 1m for PPC	19.95
CAB-PAR-FULL	Bidirectional printer cable all pins connected	9.95

Cables & Cable Adapters: VGA, Keyboard, Switchboxes & Cables, Scart Cables

ADPT-SW-S/K	Dual monitor & k/b switchbox	19.95
ADPT-SW-S/K/M	Dual monitor, k/b & mouse switchbox	24.95
CAB-KBD-MM	5p DIN M - 5p DIN M k/b cable 1.2m	7.95
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ADPT-SCAR-CMP	Amiga comp video (RCA)+2xAudio to SCART	12.95
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CAB40-CUST	Custom cable 3x40way IDE up to 1.5m	19.95
CAB44-2W-13C	44way (2.5" HD) cable 2 cntr, 13cm o/a	9.95
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Cables: HD, CDROM, Floppy Power Splitters - Tower Systems

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CABPW-2W-2H	HD/CD pwr splitter 4p-M ->2x 4p-F 15cm	6.95
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CD-SE-32X	CDPlus-SE system 32 speed with CDROM s/w	98.95
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CD-FT-32X	CDPlus EZ-Tower 32 speed with CDROM s/w	195.95
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CD-MT-24X	CDPlus MiniTower 24 speed with CDROM s/w	108.95
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CDR-SE-2x8	EZWriter-SE external 2/8x w/MakeCD	269.95
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CDR-MT-2x8	EZWriter MiniTower 2/8 speed w/MakeCD	299.95
CDR-FT-2x8	EZWriter Full EZ-Tower 2/8 speed w/MakeCD	379.90
CDRW-IN-226	EZReWriter 2x2x6 w/MakeCD for A4k,Twr	279.95
CDRW-PL-226	EZReWriter-Gold external 2x2x6 w/MakeCD	239.95
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CDR-CDSE-UG	EZCD-SE+40+44way cabs + CDROMs/w w/CDR	20.00
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Voted AUI Amiga Company of the Year

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PD Select

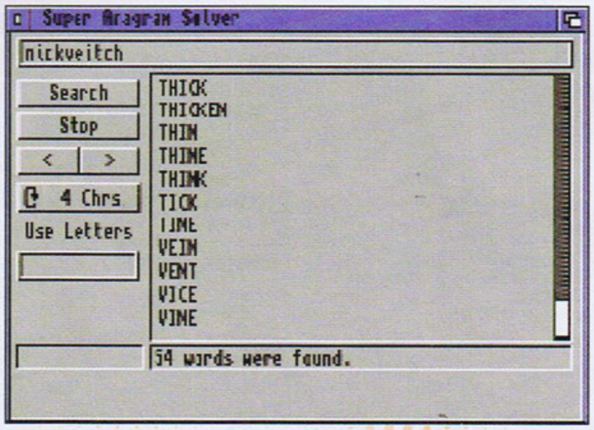
Dave Cusick sifts through another pile of PD and Shareware offerings.

Super Anagram Solver

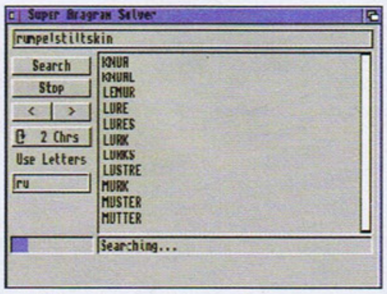
BY: Matthew Briggs
WARE: Free
PD LIBRARY: Classic Amiga
NUMBER OF DISKS: 1
PRICE: £1.00 + 75p P&P

Everyone has their own morning routine, their own way of getting the day off to the right sort of start. With me, if even one part of that routine is not stringently adhered to, it's a sure sign that the rest of the day is going to be an absolute nightmare.

On a good day, Kevin and Zoe on Radio 1 wake me up at around 7.30am.



Just some of the words found within the moniker 'Nick Veitch'.



There's no point getting up any earlier – as the old saying goes, the early bird catches the worm but the second mouse always gets the cheese. Contrary to what you might think, my listening to Kevin and Zoe is a cunning move on my

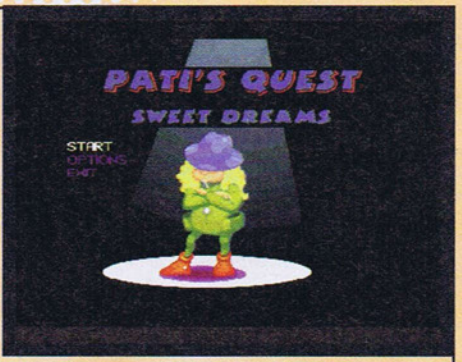
PATI'S QUEST 1.1

This has been a great month for games, with *Erections* and *Pati's Quest*, the sort of highly polished platform game for which the Amiga was so famous a few years ago.

You can stick a top of the range graphics board in the fastest, most cutting-edge Pentium available and you still won't see a game parallax scroll as smoothly as a good, old fashioned Amiga platformer. You can't beat a few decent custom chips for delivering top quality audio-visual action.

In actual fact, this is only a one-level demo of *Pati's Quest*, the full game containing three more. Each level consists of five stages and they're all pretty big. Pati can wander left, right, up and down throughout each stage, exploring, collecting various items and dodging baddies. She's armed only with a seemingly infinite supply of lollipops, which she can chuck at particularly annoying critters. A few pieces of teeth-knackering candy to the temple and even the most persistent of foes will disappear in a puff of smoke.

Pati's Quest is a top quality platformer. It offers beautiful, colourful, AGA graphics (it's A1200/A4000 only), a catchy tune and playability by the bucketload. Further details of the full version are available from Orkan's homepage at http://www.kki.net.pl/orkans, although when I checked there was little more there than a brief introduction to the programming team and some background material for *Pati's Quest*, with no firm details of a release date. Still, it's worth keeping an eye out for the full version of this game when it does become available because it should be well worth getting hold of.



Pati, not unreasonably, looking a little fed up before undertaking her latest mission.



Collect the seemingly endless amount of little red balls in order to complete your quest.



Pati has to crawl through some parts of the level while keeping an eye out for the patrolling monsters.

BY: Old Vikings/Orkan Software
WARE: Demo
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1 + 75p P&P

Selection of the month

ERECTIONS



Hooray! After twenty minutes of fumbling and flapping he's finally built himself a house.

Dear me, a game called *Erections*. How can I introduce a piece of software with a title like that without sounding hopelessly crude? You see, *Erections* isn't some sort of tacky demo featuring a Lara Croft lookalike in a variety of compromising computerised situations or anything like that at all. In actual fact it's a very fine piece of A1200 software which is sure to keep patient gamers engrossed for hours on end.

So what is called for here, it would seem, is a sensible introduction with none of this cheap, easy, fnarr-fnarr-type humour to which so many PD columnists would stoop to when confronted with a game with such a potentially misleading moniker. I reckon my best bet is to explain the storyline so there's no room for confusion or childish jocularity.

Apparently, God appeared to King Lickerish in a vision and told him to build a tower to heaven, presumably so the two of them could get together more regularly for a quiet game of poker and a few beers while their respective bread knives pottered down to the bingo hall for a girlie night. Lickerish, not labouring under the delusion which afflicts so many lesser, not-so-Royal men, that anyone is capable of cobbling together a whacking great tower so long as they are armed with a few lengths of plywood, a Black & Decker Workmate and a Reader's Digest Encyclopedia of DIY, has hired Epididymus to do his dirty work.

Epididymus, for all his unpronounceability, is a talented soul; he can fly and play the trombone, as well as having detachable arms and a penchant for opera, all of which must make him quite the centre of attention at Queen Lickerish's summer soireés. He can also pull building blocks from the ether and levitate them into position with a mere wave of the hand. (Old gag: all those who believe in psychokinesis, raise my hand...)

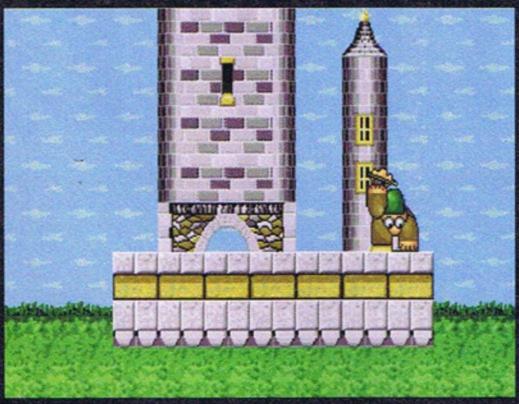
Since you play Epididymus, you'll be able to experience the thrill of being such a gifted individual first hand, and a very enjoyable experience it is too.

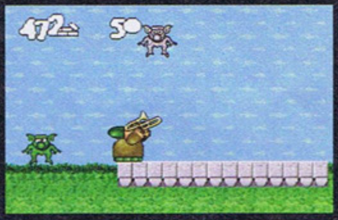
Epididymus only has a limited number of bricks, but King Lickerish will pay him for everything he builds so it's very much a case of finding out what is worth building in order to make the most effective and economical progress. However, there's a great deal more to the game than that. *Erections* is extremely hard to describe (as I'm proving here) but it's immense fun to play.

This is one of those games where you spend the first ten or fifteen minutes trying to discover exactly what you're supposed to do, and then the next six or seven years joyfully doing just that, paying little attention to meal times, sleep or, indeed, personal hygiene. It's amongst the most enjoyable and original games to have featured in PD Select for quite some time and I can't recommend it highly enough – it's an essential purchase for games fans everywhere.



It can take some getting used to this erection business but when you get going you might well find yourself playing through the night.





Occasionally a strange gargoyle will saunter down from the heavens and steal your bricks. Blow him away with an impromptu toot on your trumpet.

BY: aiXS Entertainment
WARE: Licence
PD LIBRARY: F1 Software
NUMBER OF DISKS: 1
PRICE: £3.99 + 75p P&P

behalf and not a damning indictment of my taste in radio entertainment, my thinking being that I won't be able to bear remaining in bed for more than a few moments while they're broadcasting their distinctive brand of boring bobbins across my bedroom, and so I'll have to get up almost immediately. Then it's straight into the ablutionary cycle – the three S's, if you know what I mean, generally while yawning lavishly and possibly while severely regretting having drunk quite so copiously the night before. Finally, it's downstairs to fill the kettle, scoff some cereal and have a quick flick through that day's newspaper.

> "... I consider myself to be a reasonably well adjusted individual. I wouldn't dream of machine-gunning Baby Spice..."

I'm a *Guardian* man (read into that what you will) and I have to say that I'm rather fond of its quick crosswords. I can look at the cryptic crossword for hours without getting more than a couple of answers, but if I'm not running late of a morning then I'll generally get a fair way into the quick crossword before I have to leave the house. On the other hand, I'd rather be behind schedule and hence unable to even look at the crossword than solve all but a couple of the clues and then spend the entire morning puzzling over the final pieces in the jigsaw.

Fortunately, I don't have too much of a problem with clues which contain anagrams. That's because I cheat with the hard ones – I just stick them into my Psion, which promptly rearranges them. I realise it sort of defeats the point of doing a crossword, destroying the challenge and whatnot, but hey, it gets me in a good mood for the rest of the day if I finish it before I leave the house. If I didn't have a Psion, of course, then I would be extremely grateful to get my hands on a program such as *Super Anagram Solver*.

And if you're wondering why I've just spent 400 words talking about my morning routine, it's because I can tell you everything you need to know about *Super Anagram Solver* in one sentence: it isn't much to look at but it works very effectively and will be a real godsend to puzzle fans.

Continued overleaf ➡

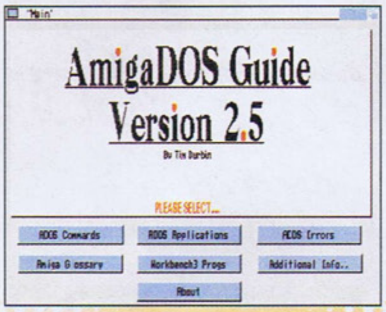
AmigaDOS Guide v2.5

BY: T Durbin
WARE: Free
PD LIBRARY: Classic Amiga
NUMBER OF DISKS: 1
PRICE: £1.00 + 75p P&P

This guide makes use of Gold Disk's *Hyperbook* browser which dates back to 1990, and so the interface is not particularly elegant or impressive. Unfortunately, presumably as a consequence of using this ancient piece of viewing software, *AmigaDOS Guide v2.5* won't run from a hard drive and must instead be run from floppy. This is extremely irritating as every remaining Amiga owner must surely have had a hard drive for years.

The time when most people are likely to want to consult an AmigaDOS guide is when they're beavering away in the Shell in a Workbench window. It is possible to launch the Shell from within *AmigaDOS Guide*, but because *Hyperbook* runs on its own screen, you'll have to keep flicking between your Workbench and this reference guide.What's more, because the extra windows *Hyperbook* opens to display details about commands don't contain a screen switching gadget in their top right corner, you have to continually use the Amiga-M keyboard shortcut to switch, passing the temporarily frozen and therefore utterly redundant *Hyperbook* window along the way.

As you'll have realised, I hate the *Hyperbook* software – it's dated, constricting and rather infuriating. Wouldn't it have been easier just to produce *AmigaDOS Guide* as an AmigaGuide document? That way it



The main menu screen for version 2.5 of the *AmigaDOS Guide*.

ONLINE UPDATE

Aminet's been a bit quiet of late, but that's not to say some interesting little items haven't been popping up from time to time amongst the endless Internet Movie Database files, soundtracker modules and rendered *Babylon 5* pictures. Those of you without net access would do well to contact one of the many PD libraries who offer to download stuff from Aminet and send it out on disk, because sometimes gems can be overlooked in library catalogues.

There's a demo version of *Fayoh 2: A New Adventure* available. The original *Fayoh* was reviewed in PD Select back in issue 109, and a darned fine platformer it was too. Like its predecessor, *Fayoh 2* owes more than a little to Nintendo's Mario series, but that's no bad thing. If it's addictive arcade action you're on the lookout for, you should take a look at *Fayoh 2*. You can find it as game/jump/FaYoh2.lha.

Also recently released is version 3.4 of *MpegA*, which is probably the best Mpeg 1 and 2, layers 1, 2 and 3 decoder available, certainly for less powerful Amigas. Even on a relatively slow '030 system it's possible to play back Mpeg audio files reasonably successfully. You're obviously going to get better performance from it if you own a more powerful Amiga (although in saying that, on an '060 system I'm reliably informed that *SongPlayer* is the way to go as far as MP3s are concerned). The archive to look for is called mus/play/mpega.lha.

One other program worth keeping an eye on at the moment is *Iconian*, which has always been my favourite Icon editing program. *Iconian* was originally created by Chad Randall, a chap who has now left the Amiga scene and has passed the entire source code on to other developers. Since then, the keyfile for version 2.98s has been made freely available and a new Freeware version, 2.98t, has followed, without a keyfile and with a couple of minor bugs fixed. Development is underway on *Iconian* version 3, so keep an eye on the gfx/edit directory of Aminet for future releases.

KNIGHT MOVES

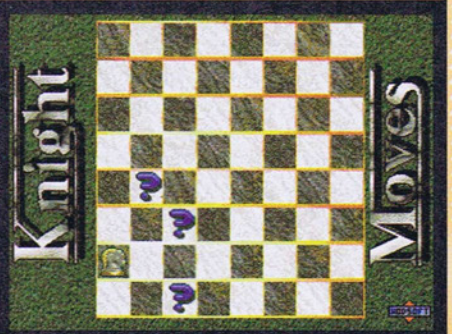


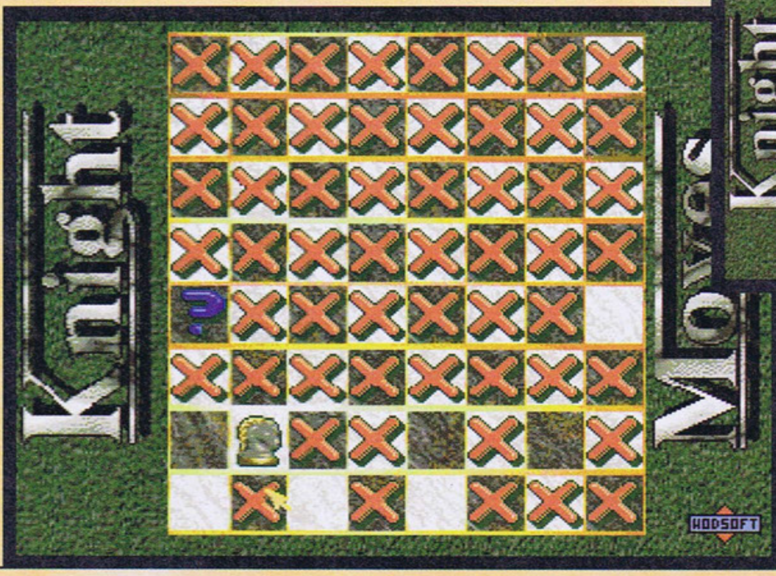
This is an intriguing game based on the movements of the knight in Chess. *Knights*, of course, have to move two squares forward and one to the side. This makes them highly effective pieces, but ones which have to be handled with considerable care if they're not to be outmanoeuvred.

The objective of *Knight Moves* is to move your knight on to every single square on an 8x8 board. However, you may not touch any square twice. It sounds like it ought to be relatively straightforward but of course it isn't; it's all too easy to get within a hair's breadth of succeeding, only to find that you've backed yourself into a corner. Possible moves are highlighted with question marks and squares you've already landed on are marked with crosses.

If you can't move to a new square because you've boxed yourself in then it's game over.

***Knight Moves* is challenging and engaging, and while doubtless with enough playing you'll be able to fathom out an effective strategy for accomplishing the prescribed feat, in all likelihood you'll get a good deal of enjoyment and frustration out of trying to find it. The graphics are more functional than impressive, and the less said about the "music" the better (though at least you can turn it off), but the mouse-driven interface is extremely straightforward and the game provides a good workout for the old grey matter. Well worth a look.**





(Above) After a random starting position, try to fill in all the squares, *Solitaire*-style.

(Left) So close, but no cigar.

BY: Wodsoft
WARE: Free
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1.00 + 75p P&P

REVENGE AGA





Bloodthirsty and captivating – a perfect way to spend a couple of hours.

Perhaps it's a sad indictment of my life, but I have to say I take an enormous amount of satisfaction in blowing computerised critters to buggery. I know I'm not alone in this either, as a visit to any online *Quake* server will prove. Thankfully, I don't consider myself to be obsessed with killing and death – there are enough such freaks out there to populate the American mid-west – and I consider myself to be a reasonably well adjusted individual. I wouldn't dream of machine-gunning Baby Spice to death in real life. Of course, that could be one of the reasons why I enjoy machine-gunning Baby Spice to death in a computer game as much as I do...

Revenge (Armchair Assassin 2), "The Mud, Blood and Bones Edition", offers you the chance to machine-gun a great many characters to death, both real and imaginary. Bill Gates, Sonic The Hedgehog, Saddam Hussein, some bloke who looks a bit like Jim Carrey in The Mask... all of them deserve elimination (allegedly...) and *Revenge* gives you the chance to machine-gun them and others besides. And that's not all. If machine-gun slaughtering isn't your thing, you can also shoot your victims with a shotgun, blast them with a photon torpedo, zap them with a pulse laser, pick them off with a night scope, drop bombs on them, send a bolt from above to strike them down, have them become victims of alien DNA experiments, roast them with fireballs and even launch air strikes against them.

Some of these weapons, the alien DNA experiments and the lightning strikes in particular, boast groovy little animations, making them even more fun to use than they sound. Watch the little blighters run from your ever advancing wave of destruction... there's no escape! Mwahahahaha! Or something.

You can play *Revenge* in one of two ways. There's the straightforward Maximum Mayhem mode, in which the objective is to simply wipe out a whole host of animated irritants in the shortest possible time. Then there's the Sequential Slaughter mode, in which death must be dispensed to characters in a specified order.

If you tire of maiming and annihilating the predefined victims then you can create your own, either by cobbling together heads, limbs and sound effects of existing characters in new ways, or by drawing your own heads.

The game is "headware", the idea being that if you like it and play it, you should send the author a selection of your heads for inclusion in a future release.



If you don't like the sight of digitised claret being spilled, you'd better close your eyes right away.

Revenge is very simple but it's extremely well done and immensely satisfying to play, in a strange, slightly sick sort of way. I seriously doubt that you'll still be glued to the monitor an hour or two after first booting *Revenge* up, but until the slightly repetitive action wears thin, you're sure to have a great deal of fun with it. It's not for the easily influenced, but if you consider yourself to be the sort of fine, upstanding citizen who won't play *Revenge* and then go out and slaughter innocent passers-by with a home-made flame-thrower, I can have no hesitation in recommending this game to you.



Yet more decapitations. I think you get the idea by now.

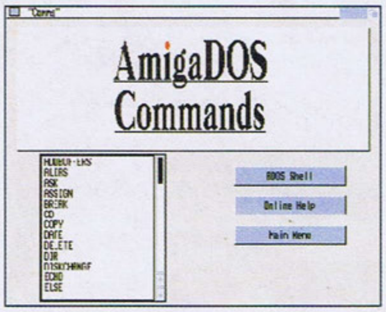
BY: Simon Hitchen
WARE: Head (see above)
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1.00 + 75p P&P

could be viewed on the Workbench screen too, it could run happily from a hard drive and it wouldn't have to have such a clunky interface.

In terms of content, the *AmigaDOS Guide* isn't bad at all. A broad selection of commands are covered, with descriptions, details of the Workbench versions in which they feature, examples and notes on usage. Various *AmigaDOS* applications, such as *Diskcopy*, *Format* and *Say*, are also covered, as are common error messages and the Workbench 3 accessory programs.

Finally, there's an Amiga Glossary which contains definitions and explanations of terms and abbreviations such as Accelerator, *CyberGraphX*, GUI and Zorro. Entries in the glossary are perhaps a little simplistic and the terms covered slightly too few and too oddly selected to make this a genuinely worthwhile section at the present time, but since the glossary is new to version 2.5 it may grow in scope and, accordingly, usefulness in the future.

To be fair, *AmigaDOS Guide* isn't bad. It's easy to use and, with the exception of the still embryonic Glossary section, reasonably comprehensive too. *AmigaDOS Guide* is clearly targeted more at beginners than at seasoned Amiga users though, and as a result it may be something of a white elephant in the current climate when newcomers to the Amiga scene seem to be a dying breed.



Just take a look at all the various commands on offer.

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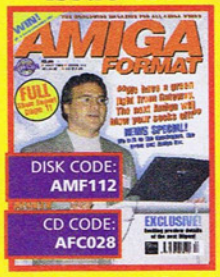
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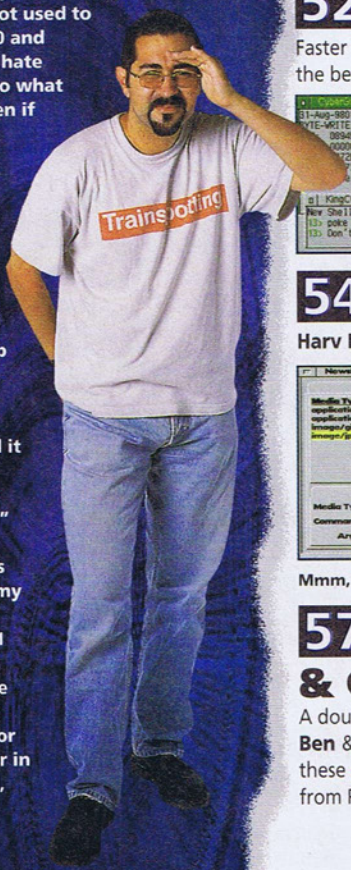
SERIOUSLY AMIGA

In-depth reviews of hardware and software that you can trust.

Blimey! I'll tell you what, once you've got used to having an '060 and some memory, you hate having to go back to what you had before, even if it was an '040 and 16Mb RAM. That was the situation earlier this issue when I had to send the CyberStorm III to Simon Goodwin, because I knew he'd do the best job on it. I sighed with relief when I got it back, and immediately tested it with *Quake* and *Lightwave* to make sure I had "enough" speed again.

Fortunately, it's now secure inside my A4000 and it won't move again, not if I have my way.

Of course, there are plenty of other fantastic goodies for you to salivate over in this issue, so go on, get reading!



Ben Vost

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CyberStorm 3

Simon Goodwin liked the Mark 1 and Mark 2 enough to buy both. So how does he feel about ***phase 5*'s *CyberStorm Mark 3***?

AMIGA GOLD FORMAT

The Mark 3 hardware is radically different from the earlier CyberStorms. It's a cut down version of the CyberStorm PPC, sharing the same SCSI 3 controller, cybppc.device. The only sign of a Power PC is a grid of solder blobs near the 68060 and space for the PPC power supply. Despite this vacant area, Mark 3s aren't upgradable to full PPC status.

There's no heat sink for the 68060 and no apparent need for one – tested over an English August day, the chip got hot but not scalding and the airflow in a big-box Amiga should keep it at a safe operating temperature.

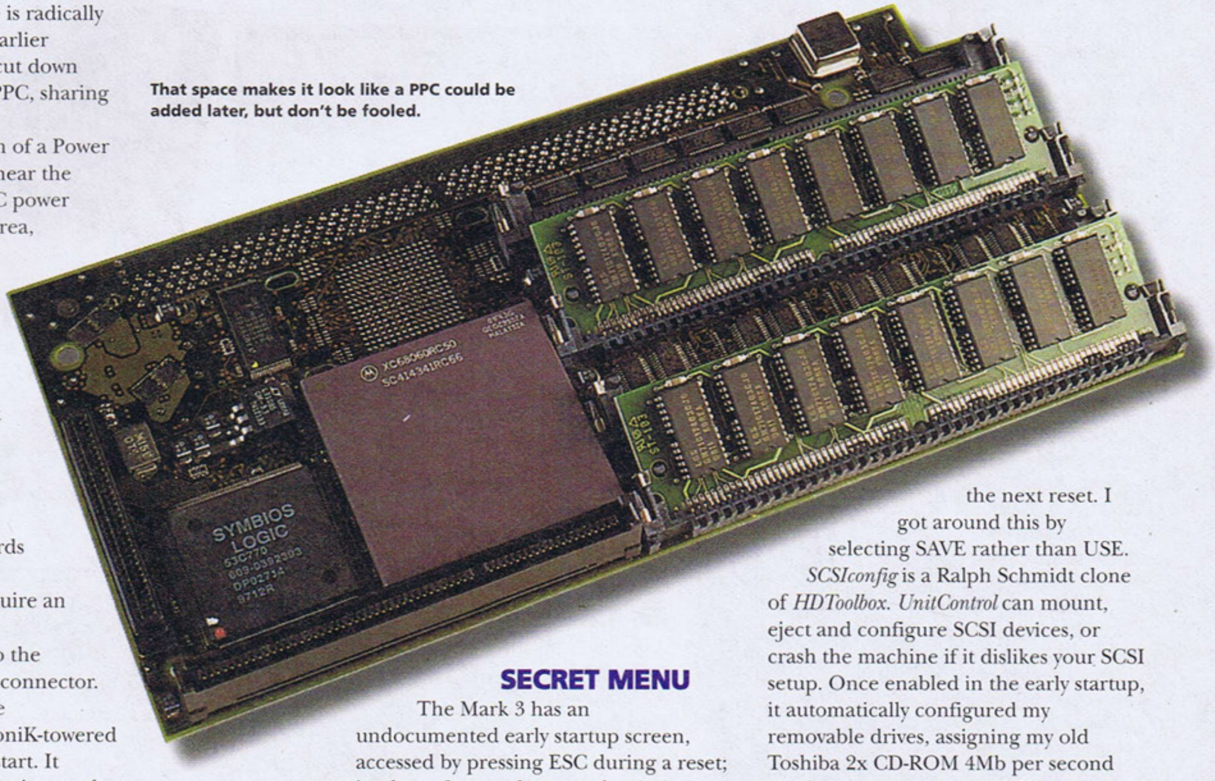
Like other processor cards which generate disk-access interrupts, CyberStorms require an interrupt wire, forgotten by Commodore, to be added to the A3000 processor expansion connector.

When I first plugged the CyberStorm 3 into my MicroniK-towered A4000, the system failed to start. It turned out that the Mark 3 insists on the Amiga motherboard deriving its timings from the processor slot, whereas the Mark 2 I'd just removed was happy with internal A4000 clock signals. The solution was to remove the processor card and move two jumpers from the INT to the EXT setting.

> **The new CyberStorm can automatically copy Kickstart into its own memory for optimal access speed.**

You get a neatly bound A5 manual with 52 pages, the first half in German, the second in what presumably passes for English in Oberursel, although imprecations like, 'Put the CyberStorm MKIII on a plane, stable underground,' would never have got past an English proof-reader.

The Mark 3 uses 128K of Flash ROM, currently more than half empty, with space reserved for 256K and disk libraries, which must be installed *before* you fit the accelerator.



That space makes it look like a PPC could be added later, but don't be fooled.

SECRET MENU

The Mark 3 has an undocumented early startup screen, accessed by pressing ESC during a reset; it takes a few prods to get the timing right. It offers System and SCSI startup menus. System menu options are toggles for 60/70nS RAM speed, MapROM, SuperScalar, BranchCache and WriteBuffer control. They're self-evident compared with their SCSI siblings.

Cryptic SCSI options for each ID allow one to eight LUNs; one- to 15-byte handshake; Async, Synchron or both; eight, 16 or auto buswidth; Reselection on, off or automatic. Tweaking options killed my Workbench mouse cursor until the next reset. I got around this by selecting SAVE rather than USE.

SCSIconfig is a Ralph Schmidt clone of *HDToolbox*. *UnitControl* can mount, eject and configure SCSI devices, or crash the machine if it dislikes your SCSI setup. Once enabled in the early startup, it automatically configured my removable drives, assigning my old Toshiba 2x CD-ROM 4Mb per second synchronous transfers (336K/second with no measurable CPU overhead), and my Zip as asynch, with reselection (1.3Mb/second, 98.8% CPU free). Fixed SCSI 3 drives will be much faster.

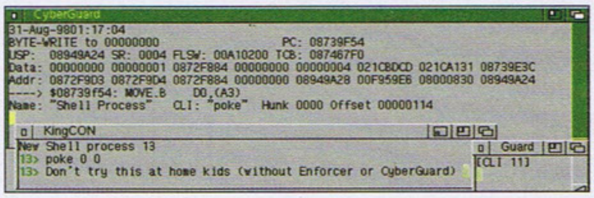
You also get *CyberGuard*, phase 5's *Enforcer* clone, *CyperPatcher*, *CyberMap* and *ROMtoFast* utilities, plus Shell commands to set cache modes and fast autovectors (hooray!). The two-disk installation is padded with PD SCSI archives, *DynamiCache*, *TD64*, unconfigured *AmiCDFS* and PPC stuff.



1,310K/second Zip SCSI transfers use only 1.2% CPU time.

MEMORY

Like the CyberStorm PPC, Mark 3 requires you to install SIMMs in matched pairs. There are four 72-pin sockets, allowing from eight to 128Mb of memory local to the processor. SIMMs must be rated for an access time of 70nS or less, with 60nS parts preferred. Raw memory timings are also influenced by accelerator logic design. At best, the Mark 3 averages 90nS to read a long word, and writes



***CyberGuard* stops naughty programs from clobbering your memory.**

in 120nS: 45 and 33Mb per second, respectively. The 70nS setting reduces speed by 21%.

Matched 4Mb SIMMs can be moved from the motherboard to the accelerator, where they may be accessed up to six times faster. There's one nasty surprise: motherboard RAM access is slow on the Mark 3 CyberStorm, slower than earlier versions and even slower than the A4000/'030.

This isn't a big issue as accelerators only use motherboard RAM when local accelerated memory runs out, but it does limit the usefulness of your existing SIMMs.

Our board had two 32Mb SIMMs fitted, yet *ShowConfig* reported 63.5Mb free. The difference was explained by the ROM speed tests, which delivered the same impressive speed as accelerator RAM. The new CyberStorm can automatically copy Kickstart into its own memory for optimal access speed. This makes hacks like *QuickROM* redundant because it's built into the Flash logic of the CyberStorm 3.

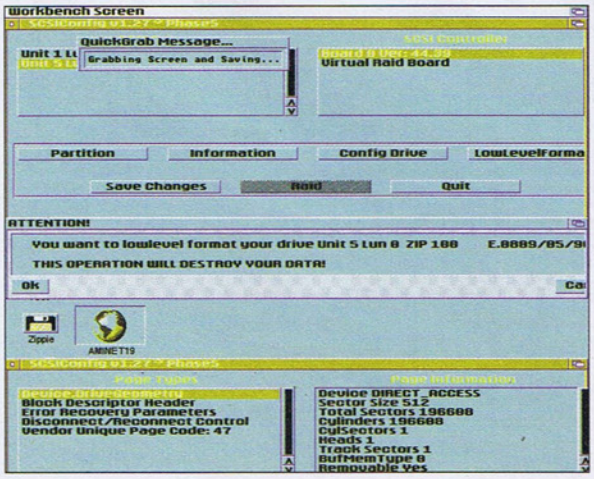
Access to fast RAM on the accelerator board is surpassed only by GVP's 68060 board, which benefits from matched pairs of SIMMs but doesn't require them. The Mark 3 is up to 50% faster at accessing local memory than Mark 2, and it just beats Mark 1. These tests are for 128-bit line transfers, allowing more time for the first transfer, then quick access to the rest of the line.

It can't match the random access speed of the venerable Warp Engine, which lacks logic to merge memory areas, but the difference will generally be swamped by the 68060's power.

GRAPHICS BOOST

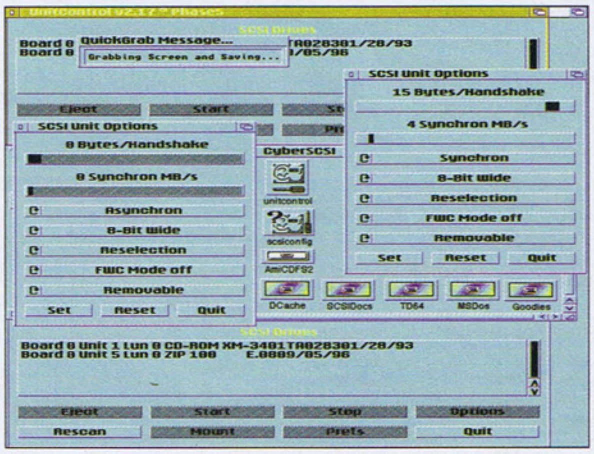
Chip RAM access is as good as you'll get, with a maximum of 7Mb per second on writes, which benefits AGA display updates. This matches earlier CyberStorms and the A4000/'030, doubles the speed of GVP's 68060 or the Commodore and Macrosystems US 68040 boards, thanks to an internal buffer which synchronises the CyberStorm to the motherboard's 68030 cycles.

***SCSIconfig* struggles with a wide Scala 11 Workbench font.**



If you want really fast graphics then your best bet is the CyberVision daughterboard. The manual confidently promises this for late last year, but as of September we've yet to see one in the *AF* office, though it's said to be selling well in Germany.

The 8Mb CyberVision communicates directly with the 64-bit bus on the new CyberStorm, outpacing any Zorro graphics cards.



***UnitControl* derived automatic settings for my Zip and CD.**

ULTRA SCSI

The new-style hard disk adaptor built into the Mark 3 is a mixed blessing. Variously known as "Ultra-SCSI" or "SCSI 3", the controller uses a connector with 18 more leads than the standard SCSI or SCSI 2 FAST on other Amiga adaptors. Ultra SCSI can sustain transfers at 40Mb per second but needs expensive 'wide SCSI' drives and cables to approach that speed.

The controller chip is first rate. It's a SCSI Script processor derived from the NCR53C710 used in Warp Engine, GVP4060, CSA Magnum and A4091 accelerators; a true co-processor with its own program in CyberStorm memory and direct access to the entire Amiga system. The Symbios 53C770 controller performs fast memory to memory transfers and complex SCSI arbitration sequences without disturbing the 68060. The result of this is extremely fast transfers with minimal impact on 68060 performance.

As usual, Mark 3 SCSI supports up to seven SCSI 2 FAST devices. Unlike them, you can use eight more devices if they conform to the Ultra SCSI or SCSI 3 specification. Unfortunately, the controller ID is fixed at seven, ruling out CyberStorm SCSI networks; only wide SCSI devices can use IDs from eight to 15.

Alas, the Mark 3 is supplied without SCSI cables, making the controller seem like an optional extra. Wide SCSI terminators are essential at each end of the device chain and the board lacks built-in termination. It took £105 of cables from Maplin to link my external SCSI 2 drives to the Mark 3.

The manual warns that SCSI 1 passive termination resistors aren't good enough and will cause "data transmission errors or wrong recognition of SCSI devices."

The internal termination in the Zip drive was accepted but the Toshiba CD didn't appear when it was at the end of the SCSI bus. You're advised to backup all your data before moving pre-formatted drives to the CyberStorm.

There's no termination on the board so you'll need at least one and perhaps two 68-pin terminators and a cable (£90 from Maplin) to get started.

Add the cost of active 68- to 50-way converters, sockets for external access (£55 to £60 to attach external drives via SCSI 1, 2 or 3) and this is the most expensive SCSI around, as well as potentially the fastest.

My only wide SCSI drive has an 80-pin RAID connector rather than the 68-pin type, so I wasn't able to take advantage of the full potential speed. However, Mark 3 doesn't appear to block interrupts like badly-designed DMA controllers, and the transparent DMA and co-processor made the overhead almost unmeasurable.

CONCLUSION

The Mark 3 is the best CyberStorm yet. Memory speed is good but not exceptional, given the 60nS 64-bit requirement, and a 50MHz clock rate seems conservative now 75MHz parts are available. Ultra SCSI is exciting, but a Mark 2 runs standard SCSI 2 FAST devices almost as fast, with cheaper cables and terminators. If you get a new drive with the Mark 3 and required connectors, you'll have the fastest disk access any Amiga can offer.

SUPPLIER: Blittersoft, 01908 261466.
PRICE: £449.95.
MACHINE TESTED ON: A4000.
REQUIREMENTS: Ultra SCSI cabling.

Pros and Cons

- \+ The fastest SCSI controller you can buy.
- \+ Easier installation than earlier CyberStorms.
- − Expensive to expand RAM or SCSI.
- − Technical pidgin English documentation.

OVERALL VERDICT:
Feel the width!

92%

NewsRog 1.1a

AMIGA GOLD FORMAT

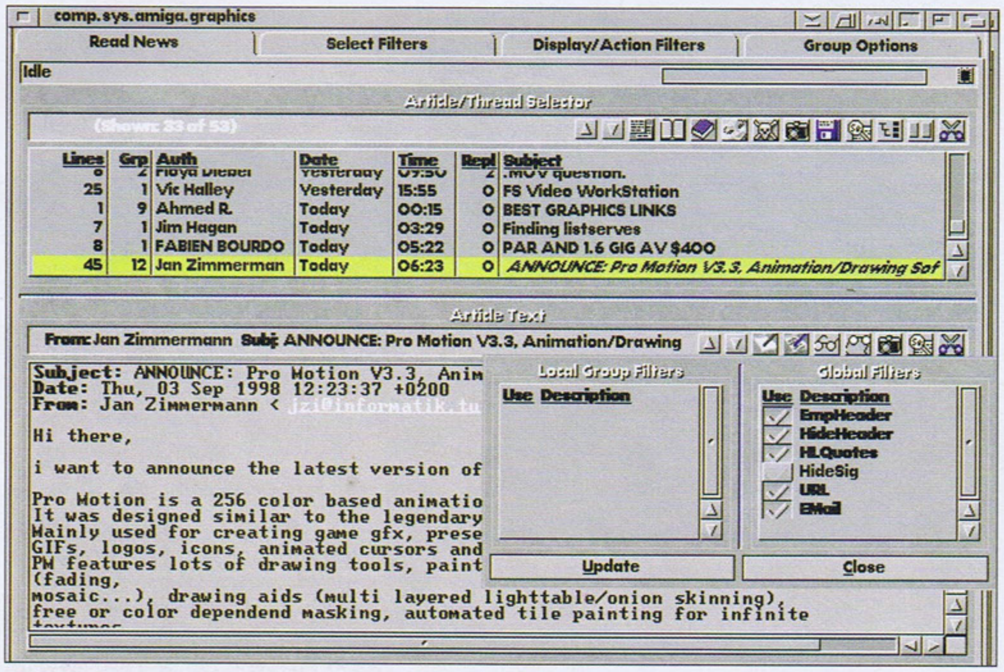
And this news just in – **Harv Laser** has found the best Usenet newsreader he's ever used.

Once in a rare while a piece of software comes along that is just so exceptional, so head and shoulders above the rest, it brings a grin to your face every time you use it. It becomes a thing of joy.

NewsRog is that kind of program. It's simply the most powerful, elegant and feature-packed Usenet newsreader I have ever used on any computer platform. Period. And, for now, it's an Amiga-only product!

Usenet newsgroups have been around since the late 70s. Early on, most people read newsgroups using a *Unix* terminal and many still do today, often with a dialup Shell account provided by a local ISP. *Unix*, once you get past the user-hostile command set, offers some very powerful Internet tools, including a superb newsreader called *Tin*.

These days there over 30,000 newsgroups (over 20 that directly support the Amiga) with about 15Gb of traffic each day, covering every topic you could possibly imagine. It's like a vast, worldwide anarchy of a messaging system, used by millions of people and carrying so much information that no one person could possibly read every new article posted to it every day.



Set your prefs to suit each newsgroup (above).

REQUIREMENTS

8Mb RAM and 8Mb hard drive recommended.
A graphics card capable of 800x600 is recommended, but not required. It runs fine on OCS, ECS, and AGA.
OS 3.x and *MUI* 3.8+ required.
You'll need *AmiTCP*, *Miami* or workalikes for online mode, plus access to an NNTP news server.
A crippled demo version is available at:
http://www.frii.com/~srk/ShadowWorks/Preview/NR.html

DIALUP ACCOUNTS

While dialup Shell accounts are still in use (I have one myself), PPP accounts are much more popular these days, and to read Usenet with a PPP account you need a TCP stack such as *Miami* or *AmiTCP* to connect to it. On top of that connection, you'll also need "client" software to run.

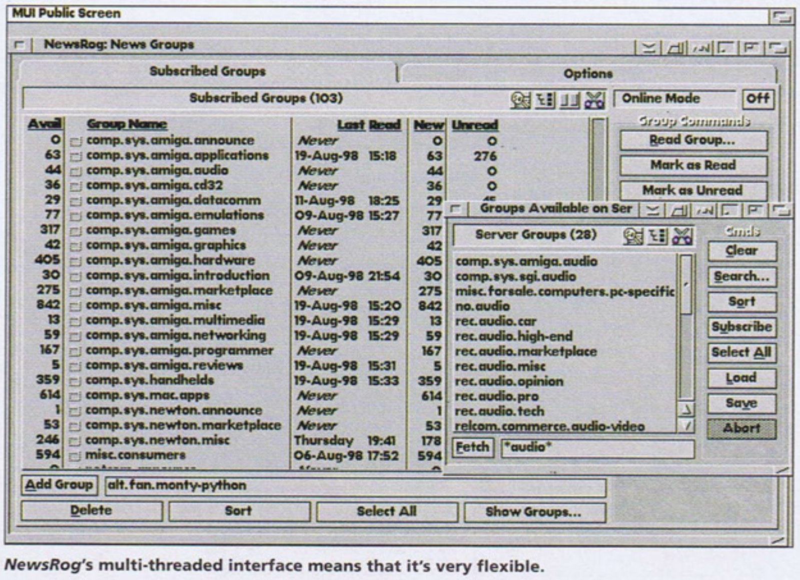
NewsRog is such a client, but because it also has the capability to download entire groups of articles, it can also be used in its offline mode. This is important in countries where you pay for your local phone calls.

Open the *NewsRog* box and you'll find a small "welcome" sheet and two Amiga DD floppy disks. Instead of a printed manual, *NewsRog* installs its docs in the form of HTML pages on your Amiga, which you can then read with any web browser. There are obviously pros and cons to this approach but the electronic manual is quite good, heavily illustrated, and much care was obviously taken in its preparation.

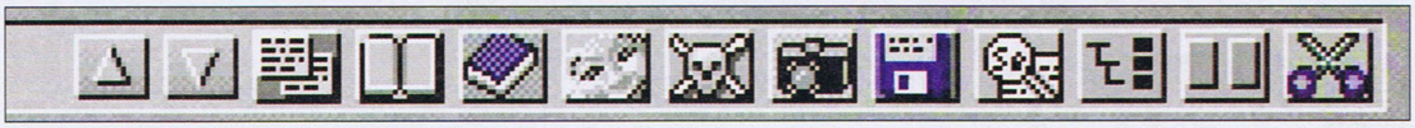
Installation takes a couple minutes and a couple of megabytes of disk and then you're ready to fire up the program and configure it.

GETTING STARTED

Launching *NewsRog* presents a bar of six pretty buttons labelled News Groups, Servers, Network, Posts, Multimedia, and Config. While the choices and



NewsRog's multi-threaded interface means that it's very flexible.



NewsRog's comprehensive toolbar is clear and intuitive.

options behind these buttons may seem overwhelming at first, you really only have to tell *NewsRog* a few things to make it go, like the NNTP news server you wish to use (and you can even get fancy and use multiple servers for different newsgroups), your name and email address, which font to use to display articles and a few other tidbits.

Then it's time to make your usual net connection, go online and pick the groups you'll want to read regularly. Unlike most other newsreaders, *NewsRog* doesn't make you sit and squirm while a huge list of 30,000 group names downloads. Instead, you use its "show groups" requestor where you can enter possible newsgroup names, including wildcard characters like *amiga*, *midi* or *marketplace*.

> "... the electronic manual is quite good, heavily illustrated, and much care was obviously taken in its preparation."

NewsRog will query your host's news server and give you a list of newsgroup name matches which you can simply click to subscribe to your choices.

You can add and delete groups at any time, even while reading articles. In fact, *NewsRog* is so multi-threaded you can have multiple newsgroups open at the same time, memory and CPU speed permitting.

MULTIMEDIA

Using *NewsRog's* "Multimedia" preferences panels, you can visit groups which contain UUencoded or MIMEd binary files, such as JPEG and GIF pictures, movies, sound files or whatever.

NewsRog will display them as inlined graphics like a web browser, plus it'll let you launch your favourite viewer or player, or save them off to disk.

Using other preference settings means you can have web URLs ("http://") displayed as links in articles; click one and your favourite browser will launch and take you to that site. Click the address of whoever posted an article and it'll launch *YAM* or your favourite mailer so you can send that person mail. How easy can it get?

If you like to post your own Usenet articles, *NewsRog* will either queue them up and then shoot them all out at once, or post each one as soon as you've finished writing it. The recently released 1.1A update patch now gives *NewsRog* its own internal posting editor with full cut/paste/include/style features, or you can call whatever external editor you prefer.

FILTERS

Once you've mastered the basics you can move on to one of *NewsRog's* most advanced and powerful concepts: filters. Here you can set up "kill files" so you never have to see unwanted or offensive articles, based on author or title. Perhaps you'd like to enter a group and see only your own postings, plus any replies to them, or see only articles by your favourite authors. Set up a couple of filters and those capabilities are literally one button click away. Some filters can act globally, on every group, or individually on single groups. There's almost no end to the way you can customise and control the way you read Usenet with *NewsRog's* superb filtering.



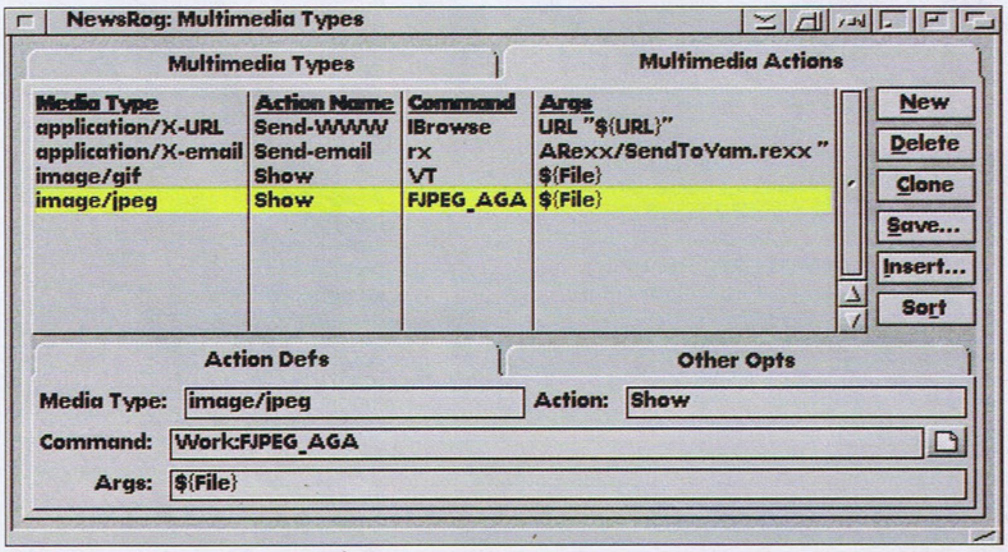
These pretty buttons control the whole of *NewsRog*.

PROS AND CONS

One small gripe here is that the docs could use some better examples on how to get started using filters, and a few simple, step-by-step, how-to guides would be appreciated.

NewsRog is extensible via its plug-in architecture so new features can easily be added by anyone capable of coding them. Its *MUI*-driven interface has bubble-help almost everywhere. There's never any head scratching about "what does this button do?" and the online manual illustrates everything.

I could go on for pages about *NewsRog* so just try the free limited demo version or buy it. $35 is a small price to pay for this high a level of software nirvana.



MIME prefs mean that you can set up viewers for all the FileTypes found in the newsgroups.

DEVELOPER: ShadowWorks Software (srk@frii.com)
http://www.frii.com/~srk/ShadowWorks/
DISTRIBUTOR: Questar Productions
Phone: 303 659 4028, **fax:** 303 659 4068, **email:** wcsinfo@questarproductions.com
Web: http://www.questarproductions.com
PRICE: US $35.00

Pros and Cons

- \+ Simple to use and good manual.
- \+ Packed with features.
- \+ Excellent value for money.
- − More guides would help.

OVERALL VERDICT:
The best Usenet newsreader I have ever used.

97%

PortPlus

If your Amiga communicates with the outside world too slowly, you may need something like the ***PortPlus***. **Andrew Korn** gives you the lowdown.

The A1200 is showing its age in an increasing number of ways. Everyone is used to the idea of upgrading that horribly slow 68020 CPU by now, and getting a graphics card to circumvent the AGA graphics hardware is becoming increasingly popular.

A less well known weakness of the A1200 is its I/O ports. The parallel and serial interfaces on the A1200 are identical to those on the A500 and A1000, a 15-year-old solution which just isn't up to the demands of today.

Now that modern modems run at a compressed 56Kbps, unless you can persuade your computer to talk to your modem at 115,200 baud, you're likely to take a performance hit. Serious modem users will want something faster than those dated 8520 UART I/O chips. This is where the PortPlus, with one fast parallel and two fast serial ports, steps in.

> ***"This will get the whole thing running invisibly from boot-up and it allows you to forget all about your old, slow ports."***

HIDDEN HEADER

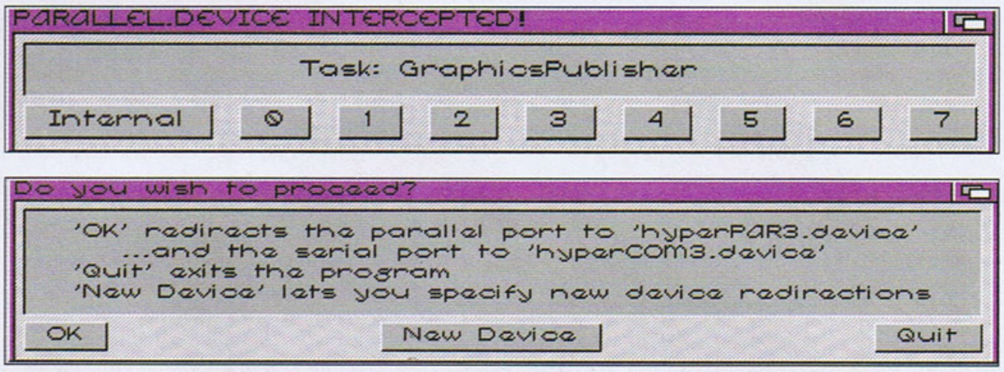
If you open up your A1200, you'll find a small cover in the middle of the metal RF shield. When removed, this reveals a set of header pins, originally intended for chip RAM expansion. PortPlus uses the remaining data lines on this so-called clock header as a high-speed data bus to a 16C552 UART.

With this DMA line feeding the PortPlus' 16-bit FIFO buffer, you not only get much faster I/O, you also get significantly lower CPU overheads too.

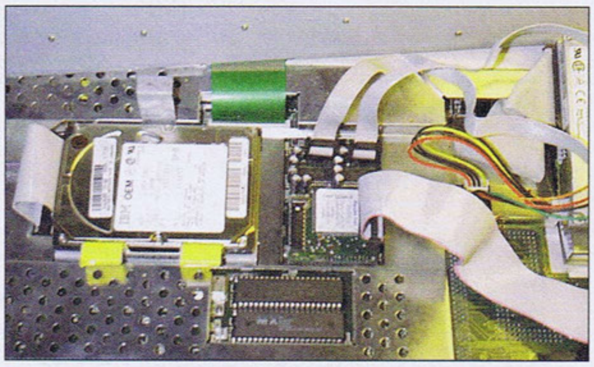
The PortPlus board sits on the clock header, nestling very neatly within the shield opening. Three headers on the PortPlus board are wired to blanking plate connectors for rear mounting in a tower case; desktop case owners have to leave them trailing out of the back.

Installation is a ten-minute job for anyone who knows how to hold a screwdriver. To use a device plugged into the PortPlus ports, your computer has to use the *HyperCOM* or *HyperPAR* drivers instead of standard serial or parallel drivers. These new drivers are put in your system by the installer program, but getting your software to use them is another matter. *Turboprint* can print via the PortPlus and *NetConnect 2* will easily function through it. However, other programs often default to the standard drivers or offer you a limited choice.

This problem is overcome by a great little piece of software called *IOWedge*. It allows you to specify devices to supplant the standard serial and parallel devices so any program using parallel or serial will automatically use the PortPlus instead. Installation is based on a simple 'redirector' GUI. You could also use the *IOWedge* instruction in your user startup, like "iowedge parallel hyperpar3.device serial hypercom3.device". This will get the whole thing running invisibly from boot-up and it allows you to forget all about your old, slow ports.



IOWedge **allows redirection of the parallel and serial ports by command line or by standard Workbench requestors.**



The PortPlus fits in so cleanly that once it's in place you'd think it was an original part of the A1200.

HOW FAST?

The 16C552 UART chip gives the PortPlus a potential speed of 460,800 baud over serial and up to 500K/s over parallel, a big step up from the internal ports. In operation these speeds aren't unrealistic, but in practice getting anything to go that fast is a tall order. 115,200 baud is sufficient for a modem, a quarter the 460,800 baud that the PortPlus is capable of.

The parallel driver can certainly speed up printing or scanning operations but you should remember that in these cases it's often not the port that's the problem, it's the wait for the CPU to calculate the next buffer load of data.

As a result, '060 Amigas will see more benefit than those with lesser CPUs as proportionately more of the time is taken up by I/O transfer and less on generating the data. Printers like lasers with larger buffers should benefit more.

COMPATIBILITY

On the face of it, the PortPlus is a great card. It's quite reasonably priced and it significantly improves the speed of your I/O. There are significant provisos, however. First is the compatibility issue; the PortPlus is a hardware hack and so it doesn't work on some systems.

I couldn't make it work on an A1200 with a revision 1D.4 motherboard, a common release, while some of the more unusual revisions don't even have the normal 22-pin clock header and won't take the board at all.

Check your motherboard and contact Eyetech if in doubt. The second proviso is that most people won't need it. For good Internet access you might as well get the PortJnr, at half the price. If the second serial and parallel is surplus to requirements, don't pay for it.

SUPPLIER: Eyetech (01642) 713185.
DEVELOPER: VMC.
PRICE: £79.95.
REQUIREMENTS: A1200.
TESTED ON: A1200 '030, A1200 '040 and 16Mb RAM.

Pros and Cons

- \+ **Easy to install.**
- \+ **Very fast.**
- \+ **Transparent operation.**
- − **Hacky hardware.**

OVERALL VERDICT:
A lovely piece of kit but it suffers incompatibilities.

88%

Power 36x CD-ROM

Yet another CD-ROM drive plops onto ***Amiga Format***'s doormat. They get cheaper and cheaper but do they get any better? **Ben Vost** investigates.

We've got the latest in a long line of CD-ROM drives from Power Computing to review, but how is it any different from any of the others, apart from being faster?

Well, there's no tray on this one – you just slide your discs into the drive. Unfortunately, this has two problems. Firstly, it means that if a disc gets stuck in the drive it becomes harder to remove. Also, because the entrance has brushes (a bit like your postbox), it might scratch gold discs which are notoriously fragile.

The 36x shares the problem of all newer CD-ROM drives as it spins down to conserve heat and energy. This means that if you haven't looked at the disc in the drive for a bit you can expect a three second overhead for copying as the drive gets back up to speed.

This drive is impressively quiet for a 36x unit and doesn't make much more noise than my normal 8x CD. It's a Sony unit and thus will probably be fairly reliable, but I have to say that the loading mechanism may not be to everyone's taste.

It's quite groovy to show people the disc sliding in and out of the drive but the last laugh may be on you if you trust this drive with gold discs. For those who don't ever use them, this won't be a concern, so it's just down to whether or not you like this kind of mechanism.

Because the drive is slightly long, it won't easily fit into an A4000. I know we're reviewing the A1200 external version here but A4000 owners might be tempted to ask Power for an internal version. Just be warned.



It's stylish but it's also too long to fit into an A4000 bay.

SUPPLIED BY: Power Computing (01234) 851500.
PRICE: £99.95 with a 4-way buffered interface and a couple of CDs.
TESTED ON: A1200, A4000.

OVERALL VERDICT:
It's fast but I'm not sure about the loading mechanism.

85%

Scan Magic Eternal

Nick Veitch sees right through this display enhancer.

Well, I can hardly refer to this particular version of the Scan Magic as ugly. Having a see-through case might not be to everyone's taste but at least you can see exactly what your money has been spent on. Mmm, lots of chips. A red light indicates that the flicker fixer is active and a green one lights up when the scandoubler is on.

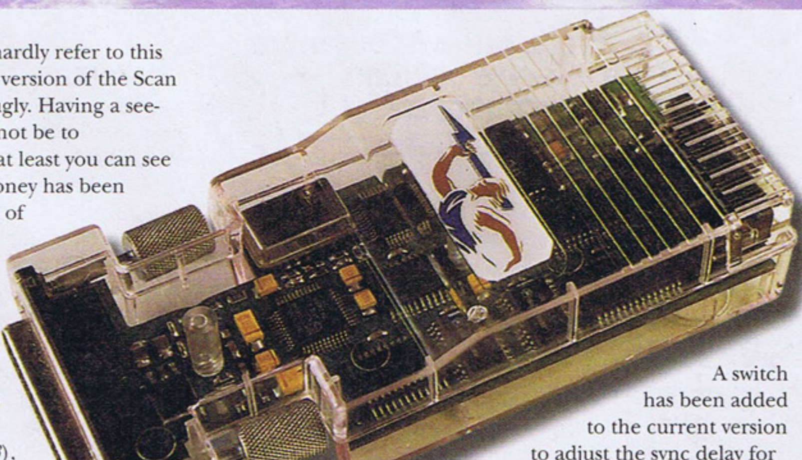
As mentioned in the previous Scan Magic review (*AF113*), the external device has to encode the RGB signal, flicker fix it and then split it into RGB and sync again. Along the way, some quality is going to be lost.

Having said that, it isn't that noticeable, apart from a little bit of vertical banding through solid colours and a nasty blinking effect when solid objects are moved around the screen.

A switch has been added to the current version to adjust the sync delay for compatibility with more monitors, but I can't say we needed it on the ones we tried the device with.

One problem you might have is with the length of the Scan Magic box. At just a touch over five inches it may pose a problem to those of you with machines on narrow desks. Remember that you still have to plug the monitor into the back of it, so you're talking about six inches of space out of the back of your machine. However, it doesn't seem like the circuitry can be crammed into a smaller space, so if you can't fit it in then you'd be better off with the internal version.

At the same price as the internal version you're certainly getting more for your money, but as the internal version works better, even if it does look like a cheap hack, you may be better off overcoming your fear of connecting things to your Amiga motherboard.



See all those chips? They fix your flicker and double your scans, you know.

DISTRIBUTOR: Power Computing.
PRICE: 99.95.
REQUIREMENTS: Any Amiga, VGA or other 31KHz monitor.

OVERALL VERDICT: It doubles your scans and fixes your flickers, but you might be better off with the internal version. Oh, and it gets very hot!

89%

ISA Catweasel

UAE gains hardware assistance, with the belated arrival of ***Catweasel*** for PCs. **Simon Goodwin** wonders if it was worth the wait.

The Catweasel floppy disk controller from Jens Schöenfeld was designed to allow PC systems to access Amiga floppy disks. In practice, the Amiga version has been much more successful, giving fast access to many disk formats, using cheap drives rather than special Amiga variants. The name comes from a cartoon TV series and the logo from the back end of a lemur.

We've been waiting for a review copy of the ISA version of Catweasel, which plugs into a PC expansion slot, since we planned our review of *UAE* and *Amiga Forever*. On the face of it, the ISA Catweasel could cure the biggest weakness of *UAE*: its reliance on a real Amiga to read and write 880K disks.

For good measure, Catweasel also gives access to 1,760K media, formatted on an Amiga 3000, 4000 or one of the add-on high density drives for other Amiga systems. This is twice as fast as genuine Amiga drives but is limited by the double-density transfer rate of Commodore's Paula chip.



It plugs into an ISA slot, but not on your Amiga...

HARDWARE

The Catweasel interface is a small card, measuring 82x104mm, secured by an eight-bit ISA bus card-edge, tinned but not plated, and a blank metal end-plate. The only other connector is a conventional 34-way pin-header for the floppy drive cable.

This cable has two connectors, each for 5.25" drives with a card edge and 3.5" drives with a pin grid. A twist in the cable distinguishes the connectors for each drive. You get four connectors but only one can be used each side of the twist, permitting two 3.5" drives, two 5.25", or one of each, either way round.

> **ISA Catweasel may appeal to hackers, but without more software it's a feeble solution to PC disk limitations.**

Four jumpers on the card set its port address. The default, marked on the board, is $320, but you must change this by moving jumpers if other boards on your system already use that space. It worked first time on our test machine, a well-stuffed 200MHz Pentium.

The biggest chip on the board is the track buffer, with the stripy tail Catweasel logo. A socketed MACH211 gate array provides the bulk of the interface logic, augmented by ten smaller logic chips. The card is synchronised by a 28.322MHz crystal oscillator in the same way as genuine Amiga motherboards are.

DOCUMENTATION

The original documentation for ISA Catweasel was written in German. We got a 'quick 'n' dirty' English translation, about ten A4 pages long, covering installation and configuration and explaining how to set jumpers to avoid sound cards or network adaptors that might otherwise clash. A helpful FAQ file answers 18 frequently asked questions and discusses workarounds for known bugs.

SOFTWARE

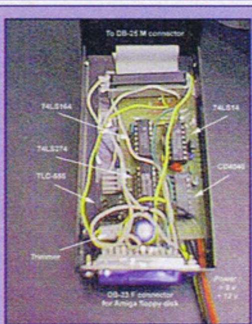
Catweasel comes with tools that run from the MS-DOS command line. Early drivers for *Linux*, the *Unix* clone, are freely available from an enthusiast's website. A recent version is included on our CD but should be superseded by the time you read this.

The MS-DOS software runs in Intel's protected mode, requiring a 486 or Pentium processor. A 486SX must be upgraded as the software requires floating point hardware. This seems to be a bizarre stipulation for a floppy disk controller, but any system capable of running *UAE* at more than a crawl should fit the bill. It wouldn't work on our Golden Gate 486SLC bridgeboard, which is pretty feeble compared to current PC standards.

Software installation isn't automated but anyone familiar with CONFIG.SYS and AUTOEXEC.BAT could manage it. A new configuration file, CATPARAM.TXT, controls the speed and error-recovery strategy for each drive.

THE RIVAL

Since ISA Catweasel was announced, a Freeware project has appeared on the Internet, using a handful of cheap chips to connect an Amiga drive to the PC parallel port. This homebrew solution appears to work, but it uses a form of dead reckoning to derive timings, making it relatively fussy about the quality of the original format. It may reject disks which Catweasel and real Amigas can access without problems.



The rival homebrew Amiga disk adaptor from Australia.

ISA CATWEASEL FORMATS

	CAPACITY	MS-DOS	LINUX
Acorn BBC & Archimedes	Any	N	N
Amiga OFS (any ROM)	880K	FR	FW
Amiga FFS (Kick 2 or 3)	880K	FR	FW
Amiga DiskSpare	952K	N	N
Amiga FFS (HD, Kick 2+)	1760K	FR	FW?
Apple][e	140K	DR	N
Apple Macintosh/Lisa	400K	DR	N
Apple Macintosh 2	720K	DR	N
Apple Macintosh Classic	800K	DR	N
Apple Macintosh 2	1440K	DR	N
Atari 8-bit	90K	N	N
Atari ST (single sided)	360K	DR	DW
Atari STe	720K	DR	DW
Atari ST (10 sector)	800K	DR	DW
Atari TT (high density)	1440K	DR	DW
C64/VIC 1541 DOS 2A	170K	DR	N
C64 1571 DOS 2A	170/341K	DR	N
Catweasel Extra DD	1160K	FR	N
Catweasel Extra HD	2380K	FR	N
CP/M	any	N	N
MS-DOS 5.25" SD	360K	FR	FW
MS-DOS 5.25" DD	720K	FR	FW
MS-DOS 3.5" DD	720K	FR	FW
MS-DOS 5.25" HD	1200K	DR	FW
MS-DOS 3.5" HD	1440K	FR	FW
MS-XDOS	180-720K	FR	FW
Sinclair ZX & QL	Any	N	N
Tandy TRS-80	Any	N	N

Key: D = disk image only, F = file system support, R = read only, W = read/write, N = not yet.

MESSYDOS

MS-DOS isn't 'device independent' so it can't access new devices and file systems with standard commands; COPY, DIR and such like only work with MS-DOS formatted media and IBM-standard controllers. Consequently, you must use Catweasel-specific commands like CATCOPY and CATDIR, though these can also access PC disks in drives A: and B:. Full Amiga wildcards are supported when reading Amiga formats, but you're limited to the PCs * and ? tokens if an MS-DOS disk is in the drive.

We were able to use these commands to read directories and files from genuine Amiga disks, but the front-end program, *CATSHELL*, wedged our hard drive, requiring a reset when we tried it under MS-DOS 6.21. This is an annoying bug but it's not crucial; *CATSHELL* is simply an alternative way of accessing disks, using menus rather than commands.

There is no CATFORMAT and therefore no way to format Amiga disks from MS-DOS. This is a software limitation as the Catweasel hardware is quite capable of the task. There are no Mac drivers, although the hardware can read 400K and 800K Mac media. PD programs also exist to read high density Mac HFS disks in standard PC drives.

CATIMAGE reads the entire contents of a disk into an MS-DOS file, for use with emulators or file extraction tools. A typical command is:

```
CATIMAGE 0:
C:\UAE\IMAGES\STARTUP.ADF
```

Drives are specified by numbers between zero and seven; zero or one for the first Catweasel card, and so on for up to four cards in one PC. Commands support Microsoft's 12- and 16-bit FAT and VFAT directory formats, with long filenames if used in a Windows95 MS-DOS compatibility box. However, the MS-DOS code is not re-entrant and it crashes if you try to use it from more than one window.

LINUX SUPPORT

The *Linux 2* drivers are rudimentary. The supplied source code calls a precompiled 'black box' which performs low level access. The driver reads Amiga and PC media but it can't write to PC disks and hasn't been tested with 1,760K Amiga HD disks. Low level formatting is supported via CWFORMAT, but this doesn't yet put any file system onto the disk.

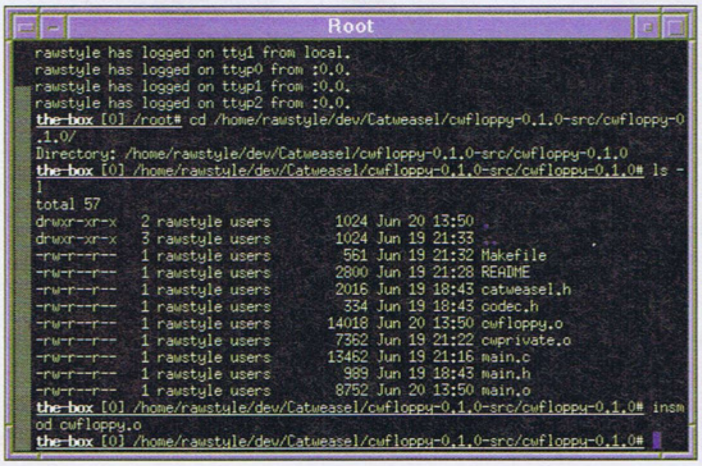
The *Linux* drivers also work on Alpha AXP workstations and BeBox support is under development. Unlike the MS-DOS code, the *Linux* driver uses standard commands, so you can mount a drive with:

```
mount -t affs /dev/cw0amigadd
/mnt
```

You can also copy an Amiga disk image to an ADF file by using the normal *Linux* incantation:

```
cp /dev/cw0amigadd
startup.adf
```

Linux meets the Catweasel.



UAE SUPPORT

As this review was finalised, a new version arrived which allows *UAE* direct disk access without an intermediate file. The next challenge is full support for formatting and writing to MS-DOS media. In theory, ISA Catweasel could support all the formats available on the Amiga, listed in the table, but in practice it may be a long wait.

UAE maestro, Bernd Schmidt, has been given a Catweasel and 'had a play' with it, but he is prevented by the Elaborate Bytes Non Disclosure Agreement from incorporating support code into the *UAE* release. This makes sense to Elaborate Bytes, who worry that others might copy their ingenious hardware as the details are embedded in the source code. Unfortunately, it's ridiculous that potential users and would-be programmers will have to suffer half-baked software support.

Jens Schöenfeld has agreed to supply obfuscated *C* code to read Catweasel hardware, so future versions of *UAE* for ISA systems will be able to read AmigaDOS, DiskSpare and many 'protected' formats. The first version will be read-only and wasn't available in time for this review, but it's a hopeful sign. In fairness to Jens, Elaborate Bytes' web pages warn that 'the drivers are not designed to be easy-to-use. Instead they are tools "for-freaks-only".'

Support for more formats and re-entrant Windows drivers are in the works, but you shouldn't hold your breath waiting for them.

CONCLUSION

ISA Catweasel is underdeveloped, illustrating the problems of extending poorly-designed Intel systems. The MS-DOS drivers are feeble compared to Amiga ones, proving the hardware's capability. The *Linux* ones are limited, though more promising.

ISA Catweasel may appeal to hackers, but without more software it's a feeble solution to PC disk limitations. It also demonstrates that real Amigas can do things a PC can't emulate properly without radical hardware changes. Even when the hardware is available, the software effort required to make it work, and keep it working, is much greater on a Wintel system than on an Amiga.

MAKER: Jens Schöenfeld, Elaborate Bytes, Schurzelter Str. 561, 52074 Aachen, Germany. Fax: +49 241 86943, email sysop@nostlgic.tng.oche.de, or visit www.jschoenfeld.com/eindex.html.

Pros and Cons

- **+ The hardware exists and it works.**
- **+ Nascent _Linux_ and DEC Alpha support.**
- **− The software is crude and restrictive.**
- **− No true Windows drivers available yet.**

OVERALL VERDICT:
The Catweasel is currently crippled by underdeveloped drivers.

56%

Sequencer One Plus

Want to make beautiful music with your Amiga? **John Kennedy** greets the return of an old friend.

Seeing companies such as Epic acknowledging that there is a demand for certain Amiga applications and then taking over their distribution is always good. This time it's the music fans who are being catered for, with the re-launch of the *Sequencer One Plus* music package.

> *... Sequencer One has quite sensible support for audio samples, with control over the playback frequency.*

If you're new to the idea of sequencing, think of it in terms of word processing for music. Like any decent text editor, you can can cut, copy and paste sections as you see fit, correcting mistakes as you go. Music sequencers are great for both the musically talented and for people like me. If you can't play for toffee, you can still enter notes one-at-a-time if necessary and then alter them until perfect. If you do have a degree of talent, you can use the multi-track nature of *Sequencer One* to compose tunes with many different voices.

MIDI MAGIC

Sequencer One Plus is compatible with the MIDI standard, present on almost every electronic instrument you can buy. This allows it to record the digital information transmitted by music keyboards, and then makes it possible to edit it on-screen by dragging the notes around with the mouse.

Once you're happy, you can hit play and the MIDI information is re-transmitted to generate sounds on the external MIDI hardware. Good MIDI synthesisers are available for £100 or less and the sound quality is astounding, with percussion, lead, string and bass sounds all catered for. By the way, if you plan to use external MIDI equipment, and that's what *Sequencer One* is best at, remember that you will need an external MIDI interface for your Amiga.

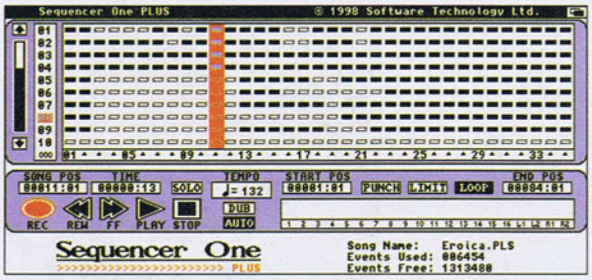
Unlike the other famous Amiga package, *Music-X*, *Sequencer One* has quite sensible support for audio samples, with control over the playback frequency. It's therefore possible to compose complete tunes using only IFF sounds and without resorting to MIDI hardware. However, you're limited to the standard four-channel sound using this approach, and if it is your intention to work in this way then you might be better off with a "Tracker" program such as *OctaMED SoundStudio*.

If you do have MIDI hardware, audio samples can be used at the same time, which is useful for special effects or sampled drum loops, for example.



Lovely colour scheme and requestors that could have been lifted from an Atari ST. Ask an adult to explain what that was...

The Bar Editor allows sequences of music to be arranged and toggled on-and-off, which is actually ideal for dance.



EDITING

There are five separate editing screens used within *Sequencer One*. These include a Track List, Step Editor, Bar Editor, Tempo Map and Juke Box. You would typically use the Track List to record a track, the Step Editor to fix any mistakes and the Bar Editor to assemble the recorded segments into a complete tune. The Tempo Map allows you to adjust the speed of your tune while the Juke Box looks after automatically loading and playing a selection of previous saved music.

The MIDI standard has evolved quite a complicate set of controls, with much more than simple note information being transmitted. For example, it's possible to adjust volume, pan and modulation parameters.

Sequencer One can cope with all of these, although not in a particularly easy to use manner. MIDI Sys Ex is supported, which is excellent news. This basically means you can back-up all the settings from your MIDI instrument and save them either alone or as part of a song. However, the program is showing the effects of its six years in hibernation.

Even when it first appeared, it was quite annoying not to be able to adjust the screen mode. The display is still permanently set to 640x200 mode so things can get rather cramped, especially when editing notes or displaying all the track details of your larger projects.

The style of requestors is also frighteningly aged, and it still looks like an Atari ST port, which is not something I thought I would be writing in the latter part of 1998. Other drawbacks include the limit of 32 tracks as it's quite easy to use them all up with larger projects.

PLUS POINTS

There are some useful editing tools for adjusting your track information, the Bar Editor approach suits modern dance music quite well. Add a keyboard like a Yamaha CS1x to your set-up and you have the potential to do what at least one other *Sequencer One Plus* owner has achieved: a number one in the UK music charts.

While *Sequencer One Plus* is a far cry from the sophistication of *Bars and Pipes* and *Music-X*, it has one thing in its favour: it's being sold and supported, which is more than can be said for either of those two programs.

SUPPLIER: Epic Marketing (0500) 131486
PRICE: £34.95
REQUIREMENTS: MIDI interface

Pros and Cons

- \+ Very fast editing and the response is snappy too.
- \+ Good-sized, well written manual to get you started.
- \+ The bold style may look dated but it's easy to get into.
- \- Lacking in features and it's a bit pricey for six year old software.

OVERALL VERDICT:
Good for beginners, although *Music-X* is better for serious MIDI work.

69%

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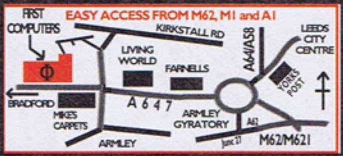
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The first prize winner is Neil Johnson from Bolton, who wins a load of stuff that's currently cluttering up our office, including a signed copy of the Amiga Theme CD and the fantastic, *AF* Gold award-winning *Uropa2*, which scored an impressive 90% in *AF105*. Keep those ShopWatch forms coming in!



AUSTRALIA

Comfix Computer Maintenance, 111 Cambridge Street, West Leederville, WA, 6007.
☎ +61 (08) 9388 1665.
Provides Amiga software and hardware support.

Unitech Electronics, 8b Tummul Place, St. Andrews, Sydney, NSW.
☎ 02 9820 3555.
All hardware and software and also make own cables. Very professional and helpful.

G. Soft Pty Ltd, Shop 4 / 2 Anderson Walk, Smithfield, South Australia, 5114. Also at 33 Adelaide Road, Gawler, South Australia, 5118. ☎ 08 8284 1266, email gsoft@cobweb.com.au.
New and used hardware and software, repairs, tech support and advice. Family run, helpful, will custom-make tower systems and will give any hardware a custom colour scheme of your choice.

Computer Magic, 44 Pascoe Vale Road, Moonee Ponds, Victoria.
☎ 03 9326 0133.

Desktop Utilities, Shop 13, Manuka Court, Manuka, Canberra, ACT.
☎ 02 6239 6658.

MVB Computer Supplies, 506 Dorset Road, Croydon, Victoria.
☎ 03 9725 6255.

Synapse Computers, 190 Riding Road, Hawthorne, Queensland.
☎ 07 3899 0980.

AUSTRIA

M.A.R. EDV Systeme, Karlsplatz 1, A-1010 Wien. ☎ 431 5057444. Sells hardware and software and offers an Amiga repair service.

BELGIUM

Amiga Service, Rue Du Nord, 93, 6180 Courcelles. ☎ 32 71 458244.
PD disks, CD-ROMs, software, hardware and services like scanning, hard drive recovery and laser printing.

AFI (Applications & Formations Informatiques), Clos Del 'Me 21, 4431 Loncin (Liege).
☎ 32 4239 0093.
Can provide help on most serious subjects. Full Amiga range with a good selection of second hand hardware. Aminet CDs are available, as well as the most common applications.

Click!, Boomsesteen Weg 468, B-2610, Wilrijk. ☎ 32 3828 1815.

Generation Amiga, Rue de l' Hotel, Des Monnaies, 120-122, 1060 Brussels. ☎ 32 2538 9360.

Amiga City, Avenue du Prince, Heritier, 176, 1200 Brussels.
☎ 32 2736 6111.

Digital Precision, Chaussee de Jette, 330, 1090 Brussels.
☎ 32 2426 0504.

DENMARK

Betafon ApS, Gylden Lovesgade 2, 1369 Kobenhan K. ☎ 45 331 41233. Email info@betafon.dk or visit http://www.betafon.dk. Sells hardware and software and has been an Amiga dealer since 1980.

Kiwi Multemedia, Lerager 60, 3600 Frederiksund. ☎ 45 4738 0639. Stocks almost all Amiga products, makes the Millennium Amiga.

GERMANY

ADX Datentechnik, Haldesdorfer Str. 119, 22179 Hamburg.
☎ 040 642 02656. Hardware and software reseller.

Softwarevertrieb Kanzmeier, Senator-Balcke-Str. 85, 28279 Bremen. ☎/fax 04 218 31682, email 01461.2277@compuserve.com

ITALY

Robymax, Via Varvariana, 14, 00133, Rome, Italy.
☎ 06 2042 7234, email robymax@mclink.it
CD-ROMs, games and hardware.

Non Solo Soft, Casella Postale 63, 10023, Chieri, Italy. ☎ 011 9415237, email solo3@chierinet.it
Full range of software and hardware.

NETHERLANDS

Barlage-Denhaag, Rabarberstraat 142a, 2563 RP Den Haag, Holland. ☎ 070 448 0282, email barlage@mailbox.hol.nl
Hardware and software supplier.

Courbois Software, Fazantlaan 61-63, 6641 XW, Beuningen. ☎ 024 6772546. All hardware and software and second-hand products at low prices.

Computer City, Zebrastraat 7-9, NL 3064 LR, Rotterdam.
☎ 31 10 4517722, email info@compcity.nl
Sells most Amiga products and has a helpful staff.

Amigis, Spanjaardstraat 53, 4331 Ep, Middelburg. ☎ 0110 625632, email info@amigin.nl
Amiga hardware and software.

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Comp Karori, Karori Shopping Mall, Karori, Wellington. ☎ 64 04 4769088, email gchiu@compkarori.nz or visit http://www.compkarori.co.nz. Sells most Amiga products.

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Dealer/distributor, promises best prices for hardware and software.

RUSSIAN FED.

AmigaLine, Moscow, Zorge 6.
☎ 7095 943 3941 or 7095 943 3871, email ambartsumian@glas.apc.org
An Amiga-oriented computer shop located in Moscow.

Amiga Service, Office 309, Bumazhnaya Str 3, Sankt-Peterburg, 198020.
☎ 812 1868842.
A1200 hardware.

SPAIN

Club Byte, C/D. Juan de Mena, 21 bajo Izq, 46008 Valencia.
☎/fax (96) 3921567.

SWITZERLAND

Applimatic SA, Rte-de-Montreux 49, CH-1618 Châtel-St-Denis, Switzerland.
☎ 41 21 931431.

Digitronic, Chr Merian – Ring 7, 4153 Reinach. ☎ 6176565.
http://www.digitronic.ch.
Full range of Amigas.

Amiga Shop 2000, Wallisellenstr.318, CH-8050, Zurich. ☎ 411 3221414. Hardware and software and skilled staff.

Amigaland, Butzenstr.1, CH-8038, Zurich.
☎ 411 482 4750.
http://www.amigaland.ch.
Full range of Amigas (shop closed on Tuesdays).

UK

Cavendish Computers, 144 Charles Street, Leicester. ☎ 0116 2510066. Hardware (old), games and utilities.

Classic, 11 Deansgate, Radcliffe, Manchester, ☎ 0161 7231638.
PD, commercial games, CD^{32}, CD-ROMs, hard drives, CD-ROM drives, A1200s, floppy drives, disks, modems. Free fitting service on hard drives.

Level 7, 113 Victoria Road West, Cleveleys.
☎ 01253 859004.

Electronics Boutique, Unit 19, St. John's Centre, Perth, PH1 5UX, Scotland.
☎ 01738 637807. Software and peripherals and will order any Amiga games you require.

Mays, 57 Church Gate, Leicester city centre. ☎ 0116 2516789. Hardware, games and utilities.

Computer Solutions, Unit 2, Mill Lane Mews, Ashby-de-la-Zouch, Leicestershire, LE65 1HP.
☎ 01530 412983. New and used software, hardware, stocks full range. Helpful staff.

Tech-Exchange, 3 Forest Road East, Nottingham, NG1 4HJ. ☎ 0115 9100077.
All Amiga products and a helpful and knowledgeable staff.

Chips, 8 Watchbell Lane, Newport, Isle of Wight.
☎ 01983 821983. Lots of classic games and older Amiga hardware.

Electronics Boutique, Gallowtree Gate, Leicester city centre.
Stocks games, although it tends to be a bit slow on new games.

Vortex Services, 13-15 St. Michael's Square, Ashton Under Lyne, Lancs, OL6 6LF.

Computer Cavern (Capri CD Distribution), 9 Dean Street, Marlow, Bucks, SL7 3AA.

Allsorts, 51 Park Road, Wosbrough Bridge, Barnsley. ☎ 0589 272940. Games, PD, disk drives, monitors (all used).

Planet Games, 3 Royal Oak Buildings, Waterloo Road, Blackpool.
☎ 01253 348738.
Amiga software.

Game, Sheffield Town Centre.
☎ 0114 2729300.
Sells various Amiga games and utility disks, and it's also possible for customers to reserve games.

Swops, Corner of Bold Street, Fleetwood.
☎ 0123 776977.

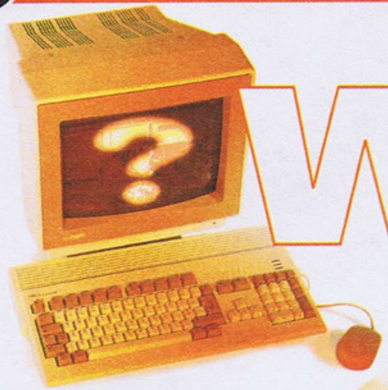
Electronics Boutique, 30 The Mall, Golden Square, Warrington, Cheshire.
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Send entries to: Shopwatch • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.



Workbench

All your hardware and software problems solved by our technical Amiga amigo John Kennedy. Write to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

HARD LUCK

I need some help, fast! I'm having problems downloading large files (over 200K normally) from ftp, www, etc, onto my hard drive. Sometimes the files I download (normally LhA, LZX or DMS files) will have CRC errors in them, but if I download them to RAM: this problem never occurs.

The same problem also occurs when I copy large files from RAM: or DF0: on to my hard drive. I've been told that it is something to do with the MaxTransfer speed of my hard drive and I've tried hundreds of different values with no luck. What I don't understand is why this problem has just appeared now. Can you help?

Adrian Mackenzie
Ullapool

If this has only just started happening and nothing else has changed, I would begin to suspect a hardware problem. It could be that the hard drive is knackered (try a complete re-format if you can) or your PSU is being strained. Of course, the MaxTransfer rate is also important and you just can pick any old value. Try 1FFF as this seems to work for almost every drive.

LACK OF UM... THINGY

I really need help with my memory usage. I find that even though I've only got a basic picture on the screen my memory seems to go down at a horrific rate. Having found a program called *FastMemFirst* on my Workbench I can't get it to work, no matter what. Have you got any ideas?

As for your magazine, along with your esteemed rivals, *CU Amiga*, you've got me through a rough time recently, as finding software locally is somewhat impossible, except for car boot sales and the like. From adverts in your mags I've bought software, hardware and other useful items (my CD collection has gone from three discs supplied with the set-up to nearly 120). Unfortunately, I'm now using a Windows keyboard, but my tower proudly displays Powered by Amiga and Amiga Inside logos. Anyway, keep up the good work and long may you prosper.

G.C. Johnson

Sadly, our esteemed rivals are no more, as you'll no doubt know by now. As for your memory woes, well I wonder where it's all going? You can comfortably forget all about FastMemFirst *as it has no relevance to the Amiga any more – it was once useful back in the very early days when fast memory was a novelty. You don't actually say how much memory you have on your system. If you don't have any form of RAM expansion then get one, or don't be surprised when you can't look at big pictures. If you do, take a good long look at your system to see what could be taking up your precious memory. Prime suspects include:*

1 Disk caching. Are you running any "speed up" utilities in the background?

2 RAD utilities. These are recoverable RAM disks, but they often need to be located in chip memory.

3 Large files in ENV:. Have a look here for long deleted programs which still store their settings on your system. The content of ENV: is copied to RAM during the start-up

HUNGRY FOR AMIGA

1 I have had my A2000 for two months. It came with a CBM 2088 PC emulation kit. My problem is that I haven't got the necessary Amiga software to start the emulation. I don't know where can I get the stuff. Will Windows 3.1 run with this card? If I have the software, how can I make the card work? A hardware manual for the card in English would be great too.

2 I read an article in *AF100* in the Eyetech advertisement which warned me not to use my ATAPI CD-ROM without a buffer-interface and I can hardly believe it. Some of my friends and I have used AT-IDE (or ATAPI) CD-ROMs for some time without this hardware and fortunately we have no problems with it.

3 How come I can format my Maxtor hard drive with 540Mb capacity on PC and only 517Mb on my Amiga? And not just that one.

4 Which inkjet printer do you recommend for the Amiga? Take into account the price of the ink cartridges (Hungarian amigos aren't so rich).

Please reply to these questions as you are my last ray of hope. By the way, I greet the *AF* team in the name of Hungarian Amiga Users.

Koltai Gabor Andras
1051 Street Vigyazo F. 6
Budapest, Hungary
varfy@goliat.eik.bme.hu

1 Your best chance is that some other Amiga owners reading this will get in touch with you and offer to send you the software and a copy of the manual. You have to remember this is quite an old system you're talking about. I think Windows 3.1 requires a 286 processor – it certainly needs a 386 to run in "enhanced" (hah) mode. Even if it did run, it would be so mind-numbingly slow that you would be better off not even trying.

2 If you're connecting equipment other than a 2.5" IDE hard drive to the internal IDE port of the A1200, you should really use a buffer card. The internal IDE port is not designed to be used with long cables or with devices other than a 2.5" hard drive. If you use other equipment and don't buffer it then you're taking a risk. It's up to you if you think that risk is worth taking. Apart from anything else, the buffer card often includes an extra two IDE channels which can be very useful.

3 The Amiga and the PC format devices in a slightly different way, and so the amount of free space reported will be different. You'll notice that formatting the drive as FFS, OFS, with international mode and so on will also give you different amounts of space.

4 I like the Epson Stylus range. As you can buy cartridge re-inking kits, the cost of ink shouldn't really be too much of an issue for you.



The Epson Stylus range offers superb print quality at a low price, but make sure you get *TurboPrint 6* at the same time.

HEARING AID

I have an Amiga A1200 with 2Mb chip RAM and 4Mb fast memory, a 1.2Gb HD and a 20x CD-ROM, but my problem is with the sound. My Amiga won't produce any sound at all through the TV or speakers and it is preventing me from using my machine properly because I have a lot of programs which use sound.

Wesley Potter

First I'd say check the tuning of your television. If you're connecting an Amiga to a TV, the sound is converted into RF via the built-in modulator. Sometimes the carrier of the sound part of the RF signal isn't located quite right and the TV ignores it. There is a little switch near the RF output on the Amiga which can alter the RF frequency which might make a difference. However, if you cannot hear sounds through speakers either, that's very bad news.

Make sure the Amiga is actually playing a sound in the first place and that the speakers are connected properly and given a power supply (the Amiga's audio output is not amplified and needs "active" or powered speakers). If you can't hear anything after all that then it's bad news. Your Amiga is bust, as we technical people say.

sequence from data stored in ENVARC:

4 Commodities and other utilities. Check your WBStartup drawer and your s:user-startup to see which programs are being launched as your system starts up.

5 Weird programs like Apple Emulators tend to require special programs in the startup-sequence which can cause problems with memory.

SHORT OF CACHE

I have an Amiga 1200 with an Apollo A1230 Lite and a 4Mb SIMM. When I use the data cache burst command in the start-up the computer will not boot or it boots to Workbench and a requestor says "intuition attempting to reset Workbench" and then it freezes. It works fine when I do not use this command in the start-up.

Maeve O'Malley

The answer is simple: don't use that command in the start-up sequence as the Apollo card clearly doesn't like it. Try using the CPU *command or a utility such as the* SysInfo *command directly from the Shell to see if the cache is switched on and experiment with it that way. If you still have no luck then the cache on that particular CPU must be inactive.*

STANDARDS ISSUE

1 Despite the fact that the Amiga is an excellent graphics machine, I'm always surprised by the fact it doesn't support "industry standard" animation formats. Oh sure, you can play AIVs and MOVs and play and create MPEG animations, but after looking hard through Aminet I can't find any program to do the simple(?) task of converting an ANIM 5 and a sound sample into an AVI or MOV.

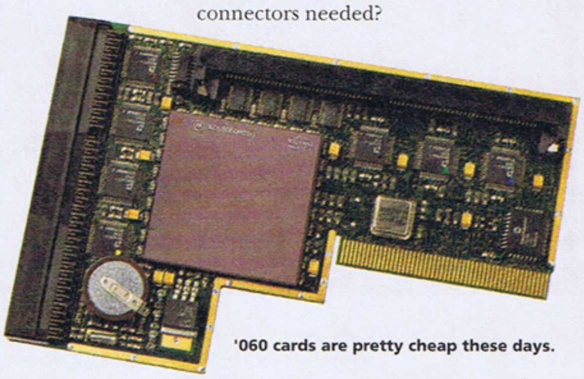
Animconvert claims to be able to do animation-only conversions, but doesn't appear to do anything very useful with alien formats (though it was quite hard to tell, since the program and it's documentation are in German).

Any suggestions? Are you going to do a review of *Power Movie*? Usually when someone asks this, it's in the current issue.

2 Is it just me or is it getting hard to find good 68030 accelerators these days? They all seem to be slightly dodgy 8Mb limit things with no SCSI option.

Whatever happened to the Blizzard 1230 IV, and one of the companies which distributed it, Gordon Harwoods, who also made the excellent Prograb 24? I'm actually thinking of getting an 68060 accelerator. Is there one you would recommend?

I had my eye on the Magnum from Wizzard. It must have SCSI as an option, and be able to take 32Mb of memory. I'd need to be able to interface to internal and external devices because I'll be putting my Amiga in a tower. How easy is it to convert between the connectors needed?



'060 cards are pretty cheap these days.

3 I've been having a little trouble with my Zip drive. Excellent though it is, it recently obliterated two PC disks (destroying the same set of scanned pictures twice). The first time, the machine crashed while writing files to it, probably due to a lack of memory and a large number of write errors that suddenly appeared on the disk. When the system rebooted, the contents of the disk were totally randomised. Random directories with random files, creation dates and sizes… far out.

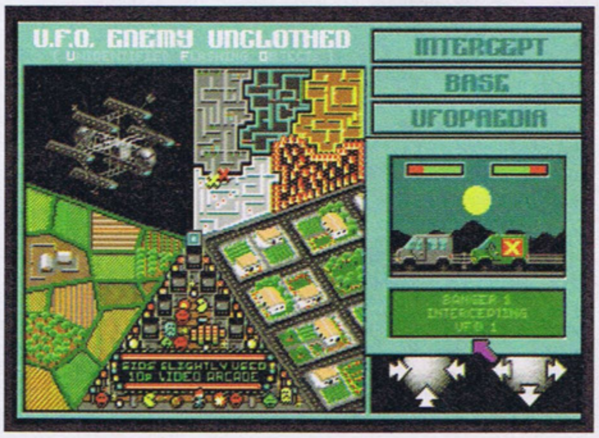
The second one was destroyed when it mysteriously took on the directory listing of another PC Zip disk I was using in the same session. That is, when listed it gave the contents of the other disk, though the "percentage used" in the title bar hadn't changed. Try to access the files and they're corrupted.

Presumably the correct files are there but have been lost track of. I thought it might be because the volumes had the same name but I'd been using them together fine the day before. Have you heard of this error before? Would the new version of *CrossDOS* fix it?

4 I always seem to have trouble with *AMOS* programs. Sometimes they just lock up on me with one of those really nasty "not even the mouse pointer moves" lock-ups. Prime examples of this are *UFO-Enemy Unclothed* and the rather good *Colonial Conquest 2*. The strange thing is, I can play a game for days or weeks and it'll be fine, but after that time it'll lock up to the point of not working at all. It's almost as if it knows I've had the program for so long, though obviously that's not true.

I found that launching and then quitting a large program before loading *UFO* seems to make it work, though *Colonial Conquest* simply refuses. This approach always seems to work with *aMiPEG* too, which often crashes after

Continued overleaf ➡



***AMOS* programs can be a real pain.**

Feedback

In your reply to D.C. Richards in the last issue, you stated that you thought there was once a piece of hardware that converted the IDE port into a SCSI port. You weren't imagining it, there was (and still is, probably). It's called the Data Flyer (not to be confused with the Power Flyer).

It allowed the connection of five SCSI and two IDE devices, but still with the normal problems of attaching two IDE devices to the A1200.

It was made by Power, though I've not seen it advertised for a while so they may not make it anymore, though it can't have been unavailable for too long. As I recall, *AF*'s review said it worked fine with hard drives but had some problems with CD-ROM drives, which could usually be fixed if you changed the driver.

Philip Corner

When dealing with Jpegs with proprietary headers, there is an easier solution than that outlined in Workbench, Feedback, in *AF113*. On Aminet, in gfx/misc, is an archive called Stripjpeg.lha. The executable will happily strip the proprietary headers of Jpegs, leaving them able to be viewed using *Visage*, *Fastview* and so on. It can also be easily incorporated into *DOpus 5* as a menu item or button using "AmigaDOS C:StripJPEG {f} {d}{RsEnter name of file} no flags."

Martin Nicholson

the first frame. Altering early start-up options doesn't help. *AMOS* may be objecting to some add-on. I can't remember when I started getting these problems but is was definitely before I bought my Zip drive or modem, my most recent additions. Any ideas?

5 In Power Computing's advert for the VDC200 camera, it states that it has real-time video in colour. Does that mean I can link it up to a VCR or frame grabber and record video with it?

Philip Corner

1 You have to remember that the Amiga was at the forefront of multimedia and for a while it was its file standards which were the industry standard, so you could complain to Microsoft that they didn't stick with the sensible IFF format. Realistically though, the PC formats were usually designed to make the most of the fact that the PC's graphics formats use "chunky" data and different colour palette formats. Until the AGA chipset, for example, the Amiga couldn't even display 256 colours, almost a bare minimum on the PC. It's easy to see how the standards would drift apart.

To convert IFFs to AVIs and vice versa, the commercial program MainActor *is one of the only options I've had any luck with. It was a Shareware program, also sold by Blittersoft and HiSoft as part of the* Cinema4D *package. You can bet we'll review Power Movie as soon as we can.*

2 Since Harwood's seem to have the habit of trying to sell you all Apples, we thought you would be pleased there aren't any adverts from them any more. phase 5, the Blizzard people, seem to be concentrating on their '060 and PPC cards at the moment, and to be honest, we can't really blame them.

Almost everyone who wants a 68030 is likely to have one by now. If you want some power and hope to make the most of new developments then a PowerUp board with SCSI option might be your best hope. SCSI connectors can be troublesome, not least because of the different formats (internal, external, high density, ultra-wide). Those tower experts at Eyetech (☎ 01642 713185) should be able to get you all the cables and adaptors you need, and Power Computing (☎ 01234 851500) also sell SCSI adaptors.

3 Sorry, I haven't had any Zip problems like this. The new version of CrossDOS *is more Zip friendly, but it doesn't include any special tools for repairing corrupted disks. You could try to find a PC owner with a copy of* Norton's Disk Utilities *for Zip drives as this might salvage your data. Your problems may be due to SCSI misbehaving so check termination and all cabling carefully.*

4 Well, really, that's AMOS *for you, isn't it? It could be a lack of memory so keep an eye on the amount free.*

5 There's a composite connector which will send out a standard analogue PAL signal. You can connect this to anything that will take such a signal, including the devices you've mentioned.

WHAT'S THE POINT?

1 I was recently forced to purchase a new floppy drive for my A1200T (Power Tower, Workbench 3.0, Seagate 420Mb HD, Apollo 1260 accelerator card with 16 Mb, 24x Goldstar IDE CD-ROM). The drive was a high density drive. What else do I need to read high density PC disks on my Amiga? I only have the version of *CrossDOS* that came with my A1200 five years ago.

Workbench

10 things to do when:

You want to treat your A1200.

1 Give it a darn good clean. If possible, take it apart so you can clean the keyboard and get rid of all the disgusting junk which gathers there. Don't use a high-power vacuum cleaner or you can say goodbye to your key-caps.

2 Buy a dust cover to keep it clean at night. You have to look after them, right? They don't like fine wines but a little industrial alcohol can help get encrusted beige stains off the casing.

3 Don't overburden it. If you're hanging lots of extra bits and pieces from it, make sure you have a power supply which is up to the job.

4 Speed up your hard drive. First of all, defragment it. Either use a utility program or simply copy everything off, re-format and copy it all back. Having more than one drive, or more than one partition, certainly helps here.

5 Don't choke performance. Make sure you have lots of memory, especially if you have an '030 card or better. Memory has never been cheaper and 8Mb of fast memory is a fairly good minimum for you to aim for.

6 Speed up your hard drive even more by using a Power Flyer to rejuvenate your Amiga's internal IDE interface.

7 Push your graphics to the limits with a Digital Camera. They're great fun and many models are now compatible with the Amiga.

8 If you haven't got a CD-ROM drive, it's about time you had. You're missing out on an astounding amount of software, not least the splendid *Amiga Format* cover CDs.

9 Get online! Your Amiga will love you if you buy a modem and get onto the Internet. Not only can you download the latest software from Aminet, you can take part in mailing list and Usenet discussions on your favourite computer. It's a virtual community, man.

10 Support the Amiga. Buy Amiga software and ask other peripheral companies to support it. Write in to *Amiga Format* and tell us what you want us to write about!

SAVE THE CAT!

Help! I have an A1200 tower with a Zorro II board, a Picasso IV, a Blizzard 1230 MKIII with 8Mb RAM, a 2.5" hard drive, a Surf and a normal Squirrel and a Zip drive with Squirrel software installed. When I boot up, the software checks for a device as usual and finds nothing. I then try the *SCSIMounter* software with the Squirrel plugged in and I get the message "inquiry failed" on all seven units, and with the Surf plugged in I get the message "no device present" on all seven units.

I've tried this with both Squirrels and both sets of software, with the hard drive or without the hard drive, and nothing seems to work. The only thing I can think it could be is a problem with compatibility between the Zorro or the Picasso, but if I don't find a cure soon I might be forced to puke on my cat.

***Jim* via email.**

If you puke on your cat it will only puke on your Amiga in revenge. Trust me, I know what I'm talking about. So your Zip drive is missing, eh?

Obviously, you have checked your SCSI cabling and double-checked the termination switch on the Zip drive and tried both SCSI ID settings. Firstly, I would suggest you examine your PCMCIA port very thoroughly. Check the connection at the Amiga end (with the aid of a torch) and make sure none of the pins are bent.

The next thing to do is contact HiSoft and make sure you have the very latest versions of the Squirrel/Zip driver software.

While you're waiting for that to arrive, try your system with the 8Mb of memory removed. It's possible that the second 4Mb bank provided by the Blizzard is not PCMCIA friendly and is causing the Squirrel to malfunction, thus preventing the Zip from appearing. If it works with the memory removed then this is the problem and you'll either have to stick to 4Mb or get a new accelerator or SCSI card.



"Fix my Squirrel or the cat gets it!"

MEMORY FREEZE

Please could you help me with a problem I'm having with my 500+. I have an Alfa Power IDE hard disk drive with 8Mb of memory. When the memory is switched on, two programs that I have installed freeze. They will only run with the memory switched off, but then I run out of memory.

Even when trying to run them from floppy disk gives me the same problem. The programs that are a problem are *Quarterback 6* and the hard disk installer that I got with the hard drive. Everything else works fine.

Mr. A A. Worthington

The fact that it is only two programs which don't work more or less rules out a hardware or memory failure problem. Instead, it would seem that the programs themselves are crashing, maybe when they try to allocate memory and get unexpected results. I can't say for sure what the problem might be, but I do have a few suggestions. First of all, check to see if there are any upgrades or patches to your software in case this is a known problem and has been fixed.

Secondly, try removing some of the extra memory. For example, if your have 8Mb then it's likely that you have either eight 1Mb SIMMs or two 4Mb SIMMs. Try reducing your system to 4Mb to see if that makes a difference. It's possible that the memory is badly mapped and is causing the software to fail.

Other than that, run SnoopDos to find out exactly what the software is trying to do when it freezes – perhaps you have old or inappropriate versions of some libraries.



Aren't we good to sort out problems for an eight year old computer?

2 On the subject of PCs, do you or any of your colleagues at *PC Format* know of anywhere where I can find a database for use under Windows 3.1?

3 Graphics cards. Just what is the advantage? Would they make screens in 256 colours redraw faster (I'm thinking mainly of the use of menus)? Would the texture previews in *Imagine 4.0* and *Cinema 4D* CD be drawn more quickly or does that depend on the speed of the processor?

If I bought a card with 4Mb of RAM would the card's memory work with the A1200's chip RAM (giving 6Mb) or replace it altogether? I've read that the Picasso IV card requires Workbench 3.1 so does this mean that it won't work at all with Workbench 3.0?

4 What is the legal position regarding the sale of older versions of software? I use *Wordworth 7* but still have copies of versions 2, 3SE, 5, and 6. Am I allowed to sell the older versions?

5 Is John Kennedy the same John Kennedy who used to write for *Amstrad Computer User*? Just curious... Many thanks

Graham Stevenson

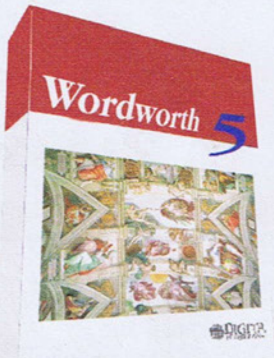
1 *High density drives don't really work well with the A1200. In fact, they aren't supposed to work at all. To use a high density drive you need an extra bit of hardware, such as the Catweasel controller, available from Golden Image (☎ 0181 900 9291) and other dealers. If you do get the drive working, you'll find that the Catweasel software will automatically mount PC HD and Amiga HD disks when they're inserted.*

2 *PC? Windows 3.1? You have the wrong magazine, I'm afraid.*

3 *One of the advantages, as you guessed, is speed. Any program which displays something will run faster as a result. A graphics card can whizz through a 256-colour Workbench like you wouldn't believe. Other advantages include:*

- *Images don't necessarily need to be stored in chip RAM, so more of this valuable memory will be free for other uses. The graphics card memory doesn't become chip memory, it simply frees it up.*
- *Graphics cards can display 16 million-colour (24-bit images) very quickly, something the Amiga simply can't do at all. This means you can use paint programs such as* Photogenics *and create effects like ultra-smooth blends.*
- *Graphics cards all produce a PC standard video output, which means they drive a standard PC monitor. Many cards can re-direct the standard Amiga output too, which means you can see everything you do normally, but on a SVGA monitor. Using a 17" monitor with an Amiga is lovely.*
- *Resolution. Fancy a 1024x768 Workbench display? No problems if you have a graphics card, a little harder if you don't.*

If a product states that it needs Workbench 3.1 then that's a good indication that it needs Workbench 3.1 and not 3.0. Version 3.1 included a few tweaks which allow for higher colour Workbench modes. Having said that, there are exceptions – VillageTronic adjusted their P96 software to work under 3.0.



Can you sell old versions of *Wordworth*? Will anyone want them? See What's the Point?

4 *Without consulting a legal expert, I would assume that you are the sole licence owner of the software, no matter what version it is. This would especially be the case if you've paid for upgrades to the software and not full packages. As such, you cannot legally sell the older versions.*

5 *Yes, I'm the one and the same. For reasons which were never obvious, I'm the John Kennedy who was once known as "Auntie John" to* Amstrad Computer User *readers, and who has yet to get a proper job. [Hmmmm, I think there's more to the story than that – Ed.]* AF



Auntie John – used to be an Amstrad owner, now trapped in an Amiga.

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved). Here are a few tips on sending in questions:



John Kennedy.

- Be concise.
- Detail the problem as best as you can.
- Describe the events that caused the problem.
- Give full details of your equipment.
- Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.

Bear these points in mind and fill in, photocopy, or copy the form below as best you can. Unfortunately we cannot reply personally.

Send your letters to Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

○ A500 ○ A500 Plus ○ A600
○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... Mb

Manufacturer: ....

Extra RAM fitted – type, size, (Mb) and manufacturer:

....

....

Details of other hardware:

....

Amiga.net



Dave Cusick wrote this article in his luxury, self-built, fully remote-controlled house.

CONTACT POINT

I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk, or via my website at http://www.dcus.demon.co.uk/.

Regular visitors to the Amiga Web Directory may have noticed, and possibly followed, a link to a fascinating article by a chap called Jim Hines. Using his Amiga and a selection of software, some of which he has written himself, Jim has managed to automate various parts of his home.

> *... it's a world which is effectively run by computers, with human beings just filling in the gaps.*

Jim lives in the US where home automation is already quite popular. Bill Gates' new home, about which a great deal has been written both on and offline, features some highly sophisticated automation systems worth millions of dollars, but on a smaller scale, home automation actually enjoys considerable popularity in the States.

Specialist magazines cater for enthusiasts and a wide selection of automation systems are available through dedicated stockists. An increasing number of expensive new houses are being pre-wired to enable the easy fitting of automation systems in the future.

Over here, home automation enjoys a rather lower profile, but it's still possible to get hold of various bits and bobs with which you can attempt to automate your own house. There are a handful of excellent websites devoted to home automation in the UK.



Everything you need to know about building your own fully-automated house can be found on the Internet.

So what do you actually need to automate your home? Well, it obviously depends on just what you want to achieve. It is actually surprisingly inexpensive to enhance your home with a few labour-saving features.

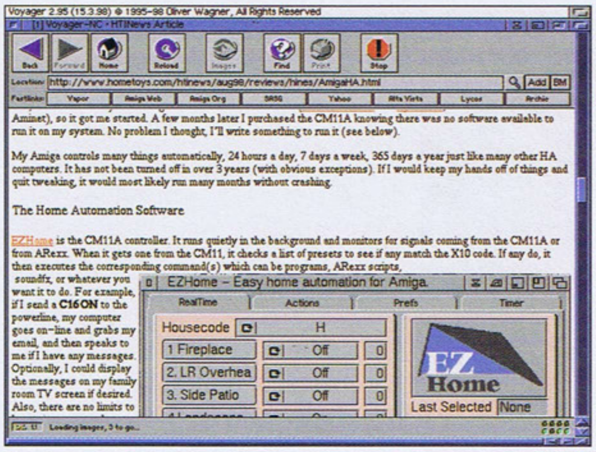
A great deal of home automation technology is based on the X10 system which was created in the late 1970s. X10 technology is available in the UK through a few suppliers (some can be found on the web) and it's relatively cheap and quite versatile.

Your house doesn't need to be specially pre-wired because X10 devices communicate using your standard household wiring so you can just stick X10 devices in places where you think they'll be most useful. For example, you could pop some light controllers in your living room so you can turn the lights on at a certain time even when you're not in the house (always helpful for deterring burglars, according to the police), or attach some automatic curtain rails to the network and have your curtains shut at a certain time each day or when a light detector senses that it's getting dark outside.

The beauty of X10 systems is that you can start off with just a couple of compatible devices and later expand your system when you have more time, money or inclination. Want to be able to control your home over the phone (perhaps from your mobile)? Simple – just add the appropriate device for about £100. Want to control your heating system? An electric thermostat

USEFUL URLS

JIM HINES' ORIGINAL HOMETOYS ARTICLE – http://www.hometoys.com/htinews/aug98/reviews/hines/AmigaHA.html
AMIGA HOME AUTOMATION – http://www.alaskalife.net/themarvins/homeauto.html
EZ-HOME HOMEPAGE – http://www.iolinc.net/~hines_j/EZHome.html
LASER BUSINESS SYSTEMS – http://www.io.com/~lbs/
UK HOME AUTOMATION PAGE (you'll be lost without Javascript, so use *Aweb* to visit it) – http://www.ukha.demon.co.uk/
COKE MACHINES ON THE INTERNET – http://www-cse.ucsd.edu/users/bsy/coke.html
ECHELON (again, needs Javascript) – http://www.echelon.com/
ELECTRONIC HOUSE MAGAZINE ONLINE – http://www.electronichouse.com/
MAPLIN ELECTRONICS (always handy for those tricky parts) – http://www.maplin.co.uk/



Right and below: The *EZHome* software is powerful and easy to use.

will cost you about £45. Beginner's guides to X10, costing about £25, are available in the UK from companies such as Laser Business Systems, and basic X10 kits start from around £65.

If you want to set up a sophisticated system then the chances are you'll want a simple way of programming it all and this is where a computer comes into its own. Although the majority of commercially available home automation software is, unsurprisingly, written for Windows systems, there is also some powerful, intuitive Amiga software designed for just this purpose. This includes Jim Hines' own *EZHome*, which is capable of controlling the X10 ActiveHome CM11A system.

In the long run, there are those who predict that a great many household appliances will become Internet-enabled, the theory being that they will all talk to one another, and to external devices, to help keep your house running smoothly. Stuck in traffic on the way back from work? No problem. Your car can contact the AA Roadwatch service for a suggested alternative route, then instruct your oven to turn itself on a little later so that your tea is ready and waiting when you get home.

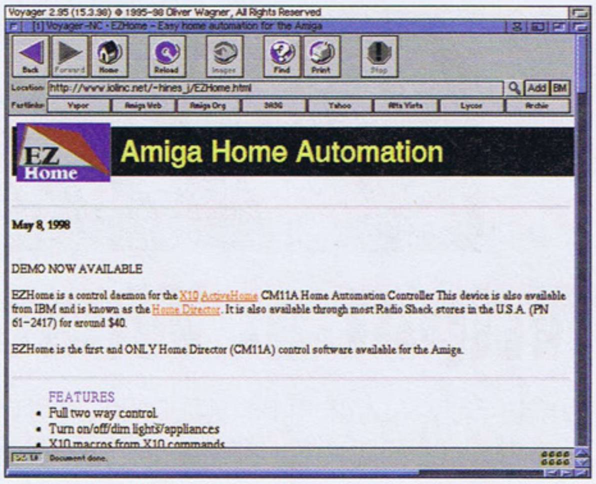
Running a little low on milk? Your fridge can add two bottles of Blue Top to the electronic shopping list held on your PDA.

There are quite a few dedicated Amiga home automation fans with sites on the web (below).



The latter example is offered by Nicholas Negroponte, whose seminal book, *Being Digital*, is one of the bibles of the digital age. There are those who believe every word of it is gospel, while there are others, myself included, who are prepared to accept that some of it is probably true while accepting the rest requires a considerable leap of faith which I'm not prepared to make.

In *Being Digital* Negroponte paints a picture of a world in which practically all household appliances are essentially stripped down PCs, capable of communicating with one another and the world at large with ease. In this world, "If your early morning flight to



Dallas is delayed, your alarm clock can ring a bit later and the car service [can be] automatically notified in accordance with traffic predictions."

It's more than a world in which computers serve humans; it's a world which is effectively run by computers, with human beings just filling in the gaps. I think it's all a little bit far-fetched, not least because there's no reason for anyone to create a world in which the master-servant relationship is turned on its head in this manner. Then again, years of working in the MIT Media Lab is bound to affect the mind...

The notion of having machines which can communicate with one another easily is not, however, as far-fetched as you might think. For years people have been attaching bizarre machines to the Internet. Net lore has it that the Carnegie Melon University Computer Science Department Coke machine was first attached to the local network in the early 1980s. For years, people around the world have been able to check how many chilled cans the machine contained at any given moment via the Internet.

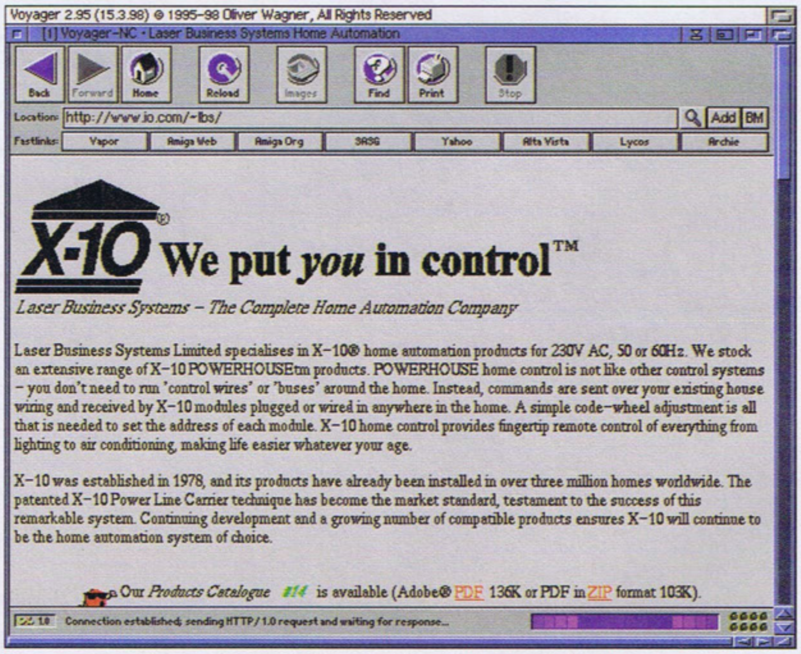
As Reza Raji has noted in a white paper produced by Echelon on Control Networks and the Internet, it's not practical to talk about assigning a unique IP address to every single appliance in the world.

It's much more realistic to talk about your home control device, in this case your Amiga, accessing the Internet (and vice versa if you have a permanent connection to the net).

In essence, your home network becomes one more network connected to the Internet. In theory, it ought to be relatively simple to use ARexx to construct some sophisticated control systems already.

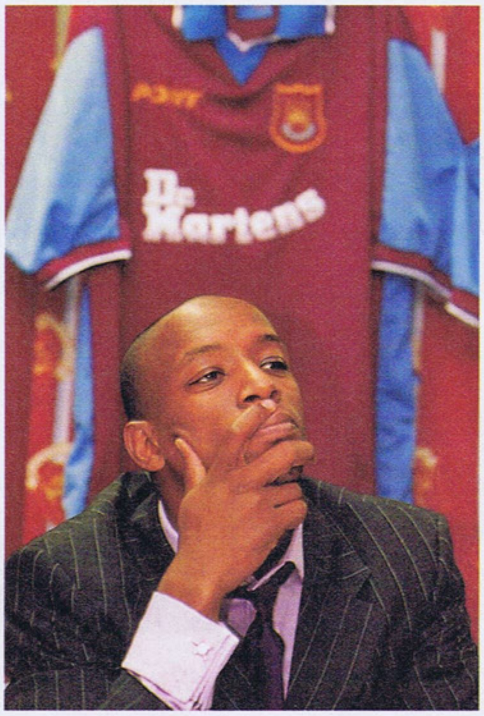
For instance, if something trips your X10 home security system you could have your Amiga dial up your ISP, launch an SMS paging program and send a message directly to your mobile phone telling you that your house alarm is going off. It could then flash a few lights around the house and turn on your stereo in an attempt to confuse or scare any intruders.

The possibilities, in fact, are only limited by your imagination.



Books on the subject can be found at Laser Business Systems' website.

Was it the Wright move?



Ian Wright at West Ham

PLUS: David Batty relives his England penalty trauma in his first major interview since the World Cup • Exclusive interviews with Gary and Phil Neville, Jay-Jay Okocha, Neil Lennon and Walter Smith • The greatest ever goal celebrations • The best columns in football by Alan Green, Kevin Keegan, Rogan Taylor and Matt Lucas

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CREATIVE

The indispensable guide to getting the most out of your Amiga



Why am I pointing at you this month? Well, it could be that I'm pointing out that all of the hard work we put in to the creative section is on behalf of you.

Please write in to us and tell us how you get on with the various tutorials we run. You should also write in to let us know what tutorials you would like to see us run in the future.

As it happens, another of our tutorials will be finishing this month, so if you can't draw icons by now, perhaps you'd better re-read it from the beginning.

Perhaps I'm pointing out that we will have a brand new Amiga music tutorial next month, written by some new writer we found. I think his name's Tiny Organ, or something like that. See you then.

Nick Veitch

SEND IT IN!

WE NEED YOUR INPUT.

Is there something that you would like to see covered in one of the current tutorial series? Why not send your suggestion to us at the magazine. Here are some things you might like to think about:

PROGRAMMING

Is there a language you can't get to grips with? Or maybe you want to know how to do a specific thing in C or ARexx? You might never find the answer unless you write in and tell us about it!

UNDER THE BONNET

Unsure of how how your Amiga really works. Not sure if you are getting the best from your hardware - write to us.

GRAPHICS

Is there something you desperately want to be able to draw? Drop us a line! Contact us at:

AF Creative • 30 Monmouth Street
Bath • Somerset • BA1 2BW
Or email: amformat@futurenet.co.uk
putting "Creative" in the subject line.

Submitting Graphics

In this special, one-off tutorial, Jason Jordache introduces the autobooting disk for submitting graphics into the Public Domain.

My first disk was sent into a PD library years ago. It was crap and didn't get accepted by 17 Bit. Looking back, I was working on a tiny 6-inch screen, so my graphics looked wonderful to me until I finally got a proper sized monitor.

I tried again, taking a couple of weeks out to create some graphics I thought might look right in games after seeing an interview with Steve Packer who worked together his anims and modules onto autobooting disks.

> "For demo disk perfection you need to get a few contacts, coders you can work with to create something unique."

That was the next step for me after sending my graphics in to the software industry – to create a disk with some sort of front end that didn't require coding, so I could send it in to the PD libraries. This time 17 Bit took it on and here's how I did it.

This follows on from previous articles on sending your graphics in to the games industry. If you happened to fail miserably on that count, the least you can do now is cheer yourself up by following this tutorial. You never know how good you'll feel when you manage to get this lot working first time.



There'll be big grins all round once you've followed our simple tutorial and you've got your graphics disks looking professional.

STEP 1 INSTALLING THE DISK

Just type `Install DF0:` at the Shell with a formatted, write-enabled disk in the drive. With Packer's demos at hand and a bunch of other PD, I started working out the rest. It'll now autoboot but you need some drawers and libraries to load Workbench, and that is what we'll make.

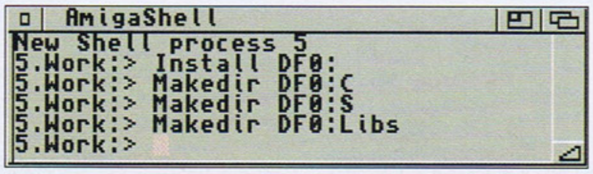
Have a simple icon-based workplace where the viewer clicks around to see each picture and animation. I figured that one day I'd make a proper scrolly interface, but never did.

STEP 2 MAKING DRAWERS

At the Shell type these lines, pressing return after each one.

```
Makedir DF0:C
Makedir DF0:S
Makedir DF0:Libs
```

You should now have three directories on your disk, as shown below.

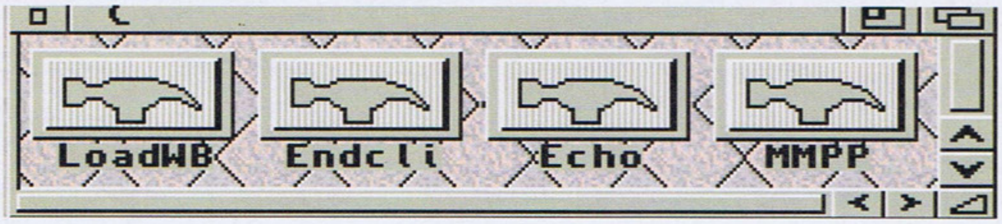


You can use the Shell or a directory utility like *DOpus* to make the necessary dirs on your floppy.

STEP 3 SYSTEM FILES

You'll need your Workbench disk or coverdisks to track down the following files: LoadWB, Endcli and Echo. Copy them into the C directory you just created on your floppy.

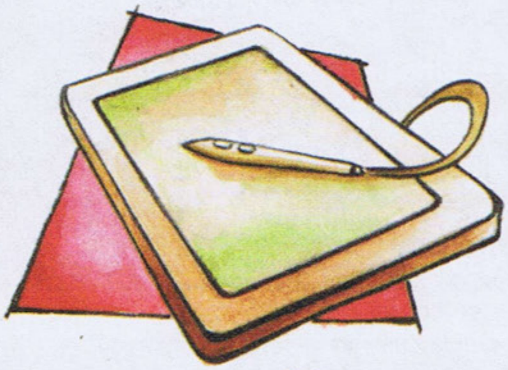
Now you'll need a few programs to display your pictures. I used *PPShow* and *PPAnim*. Use *MMPP* (aka *MuchMore* and *MuchMorePoPo*) instead of *PPMore* for text as it takes up less space. Later

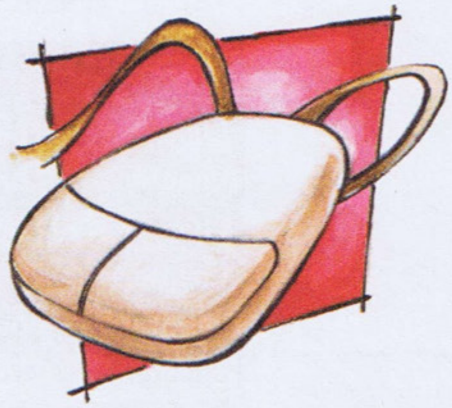


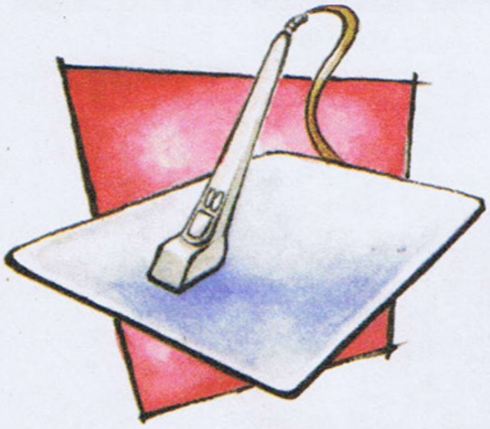
These are probably all the tools you'll need in your C dir.

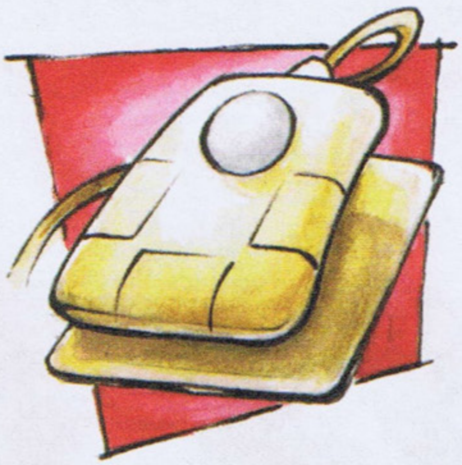
versions of *PPShow* display animations too, along with JPEGs and GIFs. The only drawback is that you'll need Workbench 2 or above. There's also Powerpacker.library and Reqtools.library, which need to go into your Libs directory for *PPShow* to work.

background. You'd need, say, *Noiseplayer* in C with a line like "Noiseplayer >nil: -p6 Music" before the LoadWB command. Here the module named Music will be played continuously.









STEP 4
THE STARTUP SEQUENCE

You've probably already dabbled with your user-startup file. You'll need to type the following four lines into a text editor and then save it as Startup- Sequence in the S directory.

```
Echo "*e[8E"
Echo "Graphics Disk by Hugh
Jarse"
LoadWB
Endcli >NIL:
```

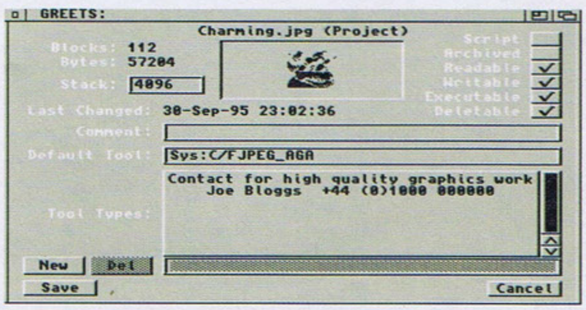
If you removed the two Echo lines (they're optional) you would no longer require the corresponding Echo file in your C directory. The first Echo positions the text of the second Echo, which is flashed onto the screen as Workbench loads. You can try changing the values between the quotes to see what happens. You can add any number of Echo commands like this and you can use Echo " " to create a blank line.

By adding to this Startup-Sequence you could play some music in the

> It'll look a lot nicer than your basic Workbench presentation as you could have fades and wipes and a decent front end.

STEP 5
ICONS

If you haven't already decided, you'll need to choose which graphics you're



Make sure you set up your icons properly.

going to put on the disk. They all require icons which need editing so that when they're clicked on the appropriate picture loads. Say one of your pictures is called Football.lbm. Click it once, select Information from the pulldown menus and type `Sys:C/PPShow` into the Default Tool field that pops up. Finally hit Save.

If it was a text file with contact details, you would have something like `Sys:C/MMPP` instead.

One problem I ran into was displaying JPEGs from my autobooting disks. Whatever I did, the little buggers wouldn't work. I was using Fast JPEG to display 256-colour images. The solution I stumbled across was to add these three lines to the Startup-Sequence, in between the last Echo command and LoadWB:

```
SetPatch QUIET
MakeDir RAM:ENV
Assign >NIL: ENV: RAM:ENV
```

For this to work, you also need the files SetPatch, MakeDir and Assign in your C directory.

STEP 6
FINISHING TOUCHES

Snapshot the icons to tidy them up. Before running off copies of the disk, run it through a disk optimiser like *ReOrg*. Think of a name to call your slideshow. If it makes it into the listings, people will want to know it by name.

Now just draft out a covering letter explaining what it's all about, whether it's AGA or not, and send copies to some of the libraries. When I submitted my work, only one library confirmed they were using the disk, but I found out that my disks popped up from time to time in listings from other libraries.

As for what sells, according to one library, with the most popular genre listed first, this is how the disks tend to go: games, utilities, demos, educational titles, slideshows, music disks and, lastly, odd bits and bobs like disk magazines.

If you've got the demo bug, you could try one of the many slideshow generators and put all this fancy work to shame. It'll look a lot nicer than your basic Workbench presentation as you could have fades and wipes and a decent front end.

For demo disk perfection you need to get a few contacts, coders you can work with to create something unique. Many of the demo crews were looking for artists the last time I looked.

A decent interface can mean the difference between whether a disk is accepted or not and it will certainly make a difference to the kind of review you're likely to get if ever you make it into the mags.

CONTACTS

Jason can be contacted at
jason@wickedmoon.demon.co.uk

Amiga Icons

In the final tutorial in this series, Ash Thomas looks at ways to improve the look of your Workbench.

AFCD32:-In_the_Mag-/Icons

ON THIS MONTH'S CD

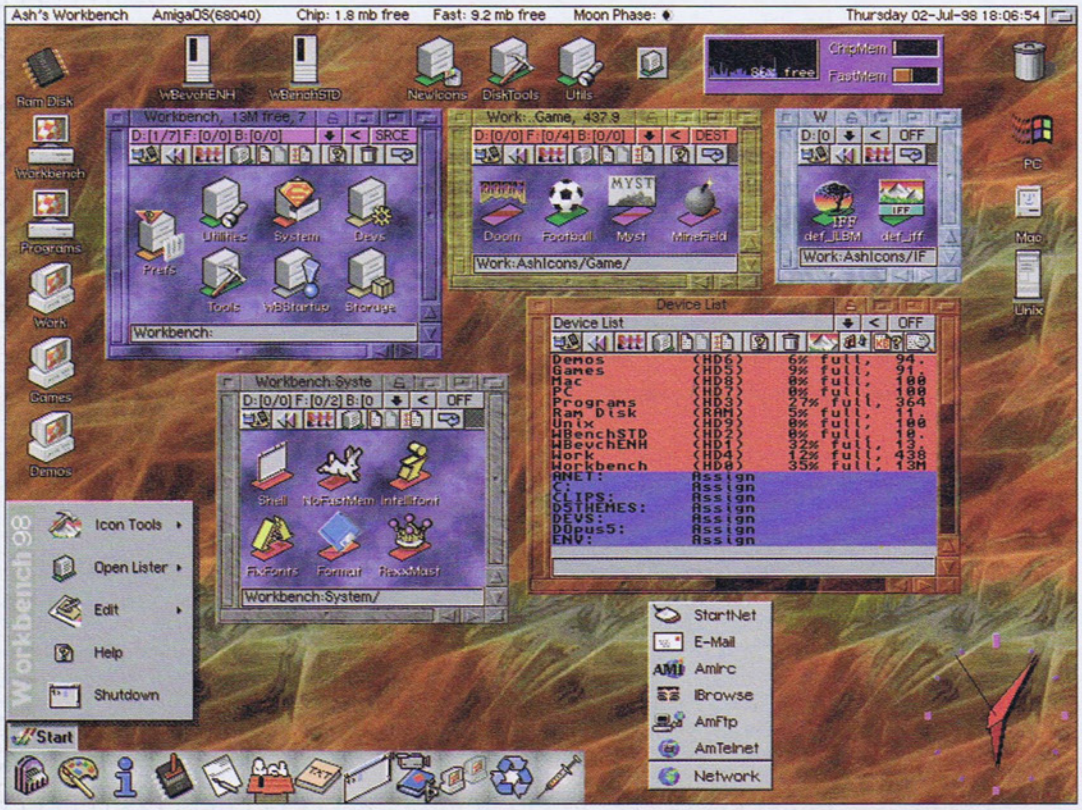
My final tutorial will show you other ways of sprucing up your Workbench to make it look like a modern OS, capable of raising an eyebrow or two. I have also put my first *NewIcon* archive on the cover CD. "AshIcons" contains over 160 *NewIcons* that are all in the 32-colour NewIcon4 Aes style. This is my first release and won't be available on Aminet for a few weeks.

Contents

Missed a tutorial in this series? Call our back issue hotline on 01458 271102.

> "The first program that will really turn your desktop into something amazing is the great Directory Opus Magellan."

There are all types of icons, from program icons, drawers and dock icons to appicons, and these should replace many of your program icons to improve the whole Workbench look. There are many ways to improve the look of the desktop as the OS hasn't been updated for years, and the amount of enhancement programs on Aminet reflects this. Not all the programs work well together (you may see the red box a few times) but with some testing you could really improve your Workbench.



This rather large screenshot shows just how good you can make Workbench (with *DOpus*) look. There are quite a few utilities running, but it's very stable. Some of the icons Phil has drawn, but a large number were drawn by myself and are available on AshIcons which is on the CD. Some of the utilities and backdrops are on the CD too.

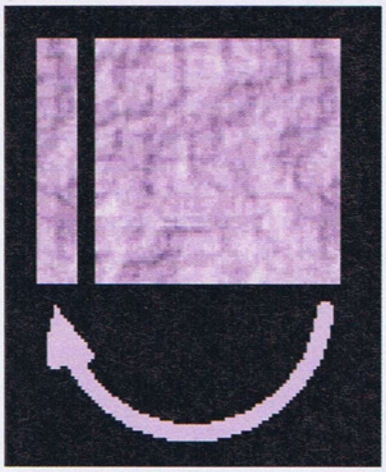
DOPUS

The first program that will really turn your desktop into something amazing is the great *Directory Opus Magellan* (currently v5.661). *DOpus* will not only give you a complete multitasking environment and a new way to work, it will also improve the look of your desktop. The listers (equivalent to Workbench windows) have a very useful toolbar at the top that is completely customisable so you could have *MagicWB* or *NewIcon* buttons. The start menus built into *DOpus* allow you to have multiple program options that can be displayed on a small footprint. I've designed a Workbench98 logo down the side of my start menu and positioned it above a button bank (the position is configurable). I also have a start menu at the top on the right hand side which will open a lister to a directory (the start button is a *NewIcon* drawer).

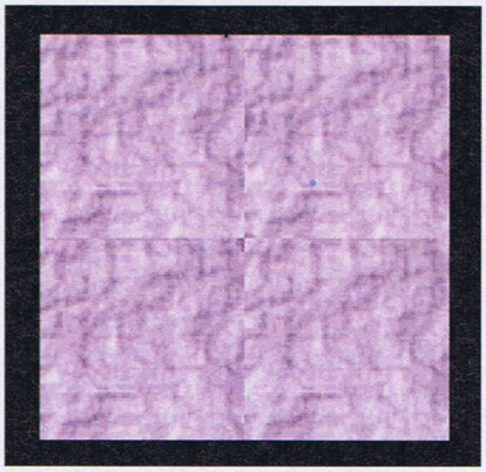
The button banks, again built into *DOpus*, are completely configurable. I've drawn most of the icons in the horizontal toolbar and all of the Network toolbar set. The next version of *DOpus* will have themes built into it via an ARexx script.

THEMES

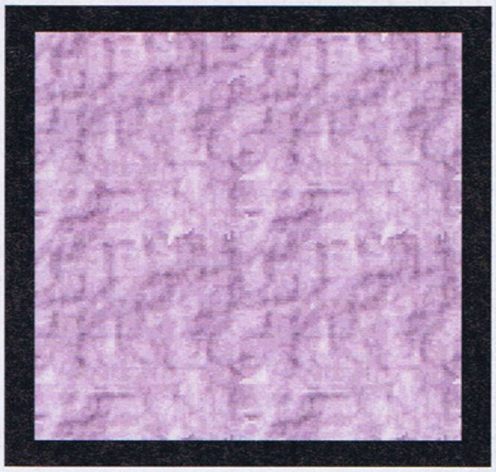
Themes first appeared with the Windows95 Plus pack. Put simply, they allow you to swap between settings and



If you copy the right hand side to the left it will make it easier to improve the tile.



Here is the tile before editing. You can see the lines where each tile ends and the next begins.



After the editing the tile becomes seamless and will look good as a backdrop.

preferences. Backdrops, window patterns, icons (possibly), sound and other configurations are saved and easily changed. There are hundreds of themes freely available on the Internet. Imagine being able to change all the sounds, backdrops and settings to a *Friends* theme, then back to your original theme with a few mouse clicks.

SHAMELESS PLUGGING

Learning how to draw has opened up a number of opportunities for me, the most notable of which is *Fubar*, a new war game which will be released for the Amiga in the next few months. I'll be responsible for doing the 2D graphics, game layout and design. I'm also working on the artwork and the themes which will be on the Plus CD of the next version of *Directory Opus*.

Birdie (again on the CD) is a great program which allows you to put backgrounds into the window border. It sounds like a daft concept but the results are really impressive, as can be seen on the screenshot. I've also put some 256-colour patterns on the CD for the graphics card-owning readers; *MagicWB* fans can use the patterns that came with the *MWB* archive and put them in their window borders.

Tolleuhr is a simple clock program that looks horrible the first time it's run. With some configuration and time you can get a clock which looks like an integral part of the desktop. Useful information can be stored in the WB title bar, all of which is built into *DOpus* or can be done with *MCP*, which is available on aminet.

Tinymeter allows you to monitor CPU usage and your systems memory with a configurable panel. It can also be used to launch programs like a start button. A couple of other patches (or rather hacks) I run are *SysIHack* and *PatchOpenWB*.

> **"Imagine being able to change all the sounds, backdrops and settings to a Friends theme, then back to your original..."**

BACKDROPS

It's surprisingly easy to create your own backdrops. Patterns and pictures can be made to look good behind all the icons you've just drawn. The major problems with patterns is getting them to tile without the seam being visible, but by using a paint package you can achieve just this. The simplest way is to mirror the pattern around all four compass points, although this often destroys the pattern and ruins the look.

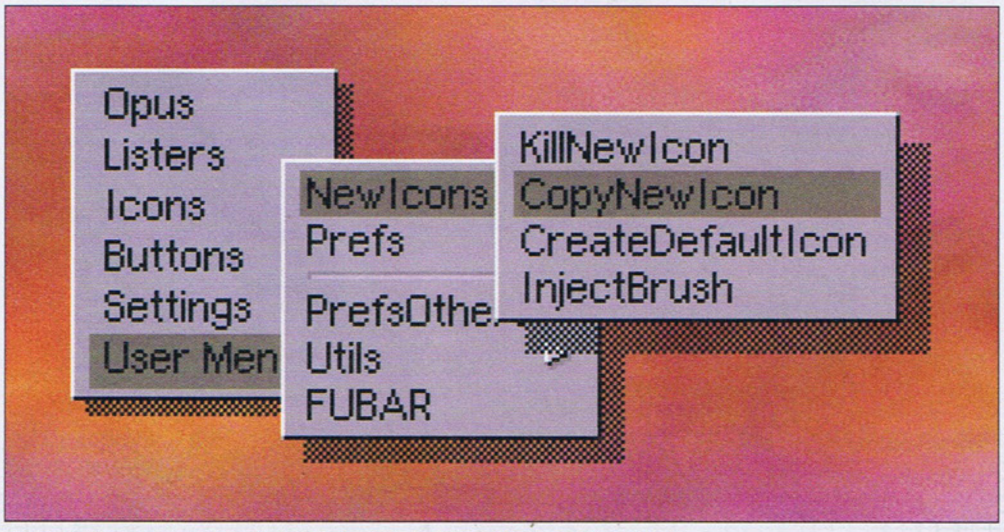
The best way to remove a seam is to hand draw the edge to cover up the line. To improve the left and right hand side of the tile you should cut out the right hand side and align it (best seen in the screenshot). This way you can then edit the two sides to make sure they'll align.

Once you've finished you should put the cut out right hand side back onto the image. If you repeat the same with the top it should align and look great.

INTERNET IMAGES

You'll have probably found some good images on the net which you would like to have as a backdrop, but you have found them to be too bright and "in your face". Using *PPaint* you can easily fix the image and make it look like a good backdrop. Load the image in and go to the menu items: Colour, Palette, and Adjust. If you then reduce the brightness and contrast the image will darken. This won't look good on the screen but if you save it and set it as your backdrop you'll find that it looks much better than the original. I did this with the Picasso96 logo (both versions are on the CD) and the darker version proves to be a non-intrusive backdrop.

Magic menu is a great utility that you should have in your WBStartup drawer. It not only makes the menus 3D, much better than black and white, it also allows popup menus to be used in every program. If you have an 800x600 screen or greater, you'll appreciate not having to go to the top of the screen every time you want to access a menu item.



This is *Magicmenu* running in its full glory, with shadows, colours and 3D gadgets.

CONTACTS

If you have any comments about this tutorial or this series, email me at: ash@absurd.demon.co.uk.
I can also be found on IRC (ANet and IRCNet) as Abstruse.

C for Yourself

Carrying on his mission to bring Amiga C programming to the masses, John Kennedy encourages you to inspect your gadgets.

Contents

Missed a tutorial in this series? Call our back issue hotline on 01458 271102.

Did you follow the example programs using Intuition menus last month? Urgh, horrible wasn't it?

A lot of effort went into defining the data structures needed to create the menus and that made them quite tedious and awkward to use. Starting with any sub-menus, we had to build up menu after menu until we'd defined them all. Hard work or what?

The good news is that the designers of the Amiga's operating system realised this and created the *GadTools* library to help. The *GadTools* library is a collection of functions which greatly simplify the process of creating menus, and also the process of creating gadgets, the main subject of this month's tutorial.

Listing 1 demonstrates how the *GadTools* library improves the menu definition chore. Compare this lump of *C* source with the one that was given last month and the improvements are pretty obvious.

Simplifying the menu program of last month with the *GadTools* library.

With that out of the way we can now turn our attention to gadgets. Gadgets are the knobs, buttons, switches and sliders which make up the user interface in a typical program. Their purpose is to model a real, physical control which the user manipulates with the mouse.

A good gadget will be obvious in its design and in the way in which it can be used; after all, it's there to allow the user to get something done.

LISTING 1

```
#include <stdio.h>
#include <exec/types.h>
#include <intuition/intuition.h>
#include <intuition/intuitionbase.h>
#include <libraries/gadtools.h>

#include <graphics/gfxmacros.h>
#include <graphics/gfxbase.h>

#include <clib/exec_protos.h>
#include <clib/dos_protos.h>
#include <clib/intuition_protos.h>
#include <clib/gadtools_protos.h>

struct Library *IntuitionBase;
struct Library *GadToolsBase;

struct NewMenu mymenus[] =
{
{NM_TITLE,"Project",0,0,0,0,},
{NM_ITEM,"Open...","O",0,0,0,},
{NM_ITEM,"Close","C",0,0,0,},
{NM_ITEM,"Exit","X",0,0,0,},
{NM_END,NULL,0,0,0,0,},
};


struct TagItem win_tags[] = {// The window
{WA_Left,20},
{WA_Top,20},
{WA_Width,300},
{WA_Height,250},
{WA_CloseGadget, TRUE},
{WA_Activate, TRUE},
{WA_IDCMP,IDCMP_MENUPICK|IDCMP_CLOSEWINDOW},
{TAG_DONE,NULL},
};

void main()
{

struct IntuiMessage *msg;
struct Window *win;
int flag = TRUE;
UWORD menunumber;
UWORD which_menu;
UWORD which_item;
struct Menu *menustrip;
APTR *visualinfo;

IntuitionBase = OpenLibrary("intuition.library",37);

if (IntuitionBase!=NULL)
{

GadToolsBase=OpenLibrary("gadtools.library",37L);

if (GadToolsBase!=NULL)

{
win=OpenWindowTagList(NULL,win_tags);
if (win!=NULL)
{

visualinfo=GetVisualInfo(win->WScreen,TAG_END);
menustrip=CreateMenus(mymenus,TAG_END);
LayoutMenus(menustrip,visualinfo,TAG_END);
SetMenuStrip(win, menustrip);

while (flag)
{

WaitPort(win->UserPort);
// Wait around for message

while (msg = (struct IntuiMessage *)GetMsg(win->UserPort))
{

switch (msg->Class)
{
case IDCMP_CLOSEWINDOW:
flag=FALSE;
break;

case IDCMP_MENUPICK:
menunumber=msg->Code;
which_item=ITEMNUM(menunumber);
which_menu=MENUNUM(menunumber);
printf("Menu number:%d\n",which_menu);
printf("Menu item:%d\n",which_item);

if ((which_menu==0) && (which_item==2))
flag=FALSE;
break;

}

ReplyMsg((struct Message *)msg);
}
}

ClearMenuStrip(win);
FreeMenus(menustrip);
FreeVisualInfo(visualinfo);

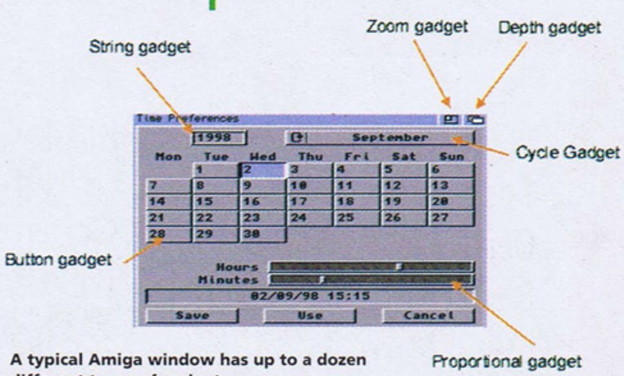
CloseWindow(win);
}

CloseLibrary((struct Library *)GadToolsBase);
}
CloseLibrary((struct Library *)IntuitionBase);
}
}
```

Adding gadgets to your own software is relatively straightforward, especially if you use the *GadTools* library. As you should expect by now, Intuition looks after all the drawing, moving and updating of the gadgets. Once you've created them, you can forget about them and your program and simply wait for the Intuition IDCMP messages to appear. As with menus, there are a few little magic spells required to decode the messages. You can then tell which gadget the user has, and what they've done with it.

GADGET GALLERY

There are actually more gadgets available than you might expect. For starters, every Window has its own collection of buttons, the close gadget being the most obvious. Windows also have sliders to look around and depth gadgets to shuffle the windows.



A typical Amiga window has up to a dozen different types of gadget.

Have a look at any Amiga application and you'll see plenty of others. There are buttons to click (which could say "OK" or "Close", for example), and string gadgets to enter

> **Gadgets are the knobs, buttons, switches and sliders which make up the user interface in a typical program.**

text into. Proportional gadgets allow you to quickly set numeric values and cycle gadgets let you pick one object out of a list. The *GadTools* library supports 12 types of gadgets in total, more than enough for most programs.

We could approach writing a gadget program in the same way as we approached creating the menus last month, but let's not. Instead, let's assume the *GadTools* library is available and make the most of it. Remember, unless your Amiga is straight out of the Ark, we can safely assume this essential Workbench library is at our disposal.

CODING GADGETS

As with the new and improved menu code, there's a new and simple data structure used to define a gadget. The structure looks like this:

```
struct NewGadget
{
  WORD ng_LeftEdge, ng_TopEdge;
  WORD ng_Width, ng_Height;
  UBYTE *ng_GadgetText;
  struct TextAttr *ng_TextAttr;
  UWORD ng_GadgetID;
  ULONG ng_Flags;
  APTR ng_VisualInfo;
  APTR ng_UserData;
}
```

This contains the position and size of the gadget, as well as any text (and its associated style) linked to the gadget, and also some flags controlling its appearance. Notice that the type of gadget (i.e. button, knob, slider) isn't included at this stage. This information is used with the function *CreateGadget*, which is given the type, a pointer to the *NewGadget* structure, links to previous and current gadgets and any special tags used to control aspects of the gadget. As always, an example will hopefully make things more obvious.

Just before we get to the example code, I'd better explain exactly what a gadget actually does. As you might remember, Intuition looks after all the difficult stuff and simply sends your program messages when something important happens. These messages, called IDCMP messages, need to be decoded so your program can determine what's happened.

There are many types of message which could be sent to your program, such as key-presses, menu selections, the insertion or removal of a floppy disk or a timer. It's up to your program to decode the messages and to decide on the action given.

As we saw with the menu example, this can mean there's a fair amount of magic spells involved in taking the messages and stripping out the information we need. This is unfortunate but it's a consequence of the immense detail which Intuition programs inundate us with. Basically, we can never have too much information and having to work a little to extract what's vital is a fair price to pay.

We can now take a look at listing two, which is a program that creates a single gadget in the middle of the window. This gadget is a button and when clicked on it causes the program to exit. You should be able to work through the listing and get a good grasp of what's actually happening. Even better, you can type it into your own C compiler and give it a go.

There are a few things worth pointing out here. First of all, the window is defined in a slightly different way. Before we open the window we need to define the gadget. This is so we can link the gadget into the window's structure so it appears as we open the window. All gadgets are linked to windows in this way.

This means we don't list all the tags which make up the window outside the main part of the program. Instead, we use a slightly different window opening function and then list all the tags there are. This allows us to include "glist", which by this stage is updated to point to the newly created gadget.

Once we get the usual opening up of libraries out of the way we can create our single, button-style gadget. The gadget is created and linked into the forthcoming window structure as noted. The window is opened and then the program waits for IDCMP messages. We've asked Intuition to give us messages if the user closes the window or if a gadget is clicked so a message fulfilling either of these criteria will cause the program to exit.

There really is a great deal more to gadgets than this brief introduction, but we don't have space here to cover all the ins and outs. If you're interested in learning more you should either track down the *Amiga Rom Kernel Manuals* or buy the *Developer* CD-ROM. The CD-ROM should be high on your list as it contains almost all there is to know about Amiga programming.

Adding a button gadget to a window.

LISTING 2

```
#include <stdio.h>
#include <exec/types.h>
#include <intuition/intuition.h>
#include <intuition/intuitionbase.h>
#include <libraries/gadtools.h>

#include <graphics/gfxmacros.h>
#include <graphics/gfxbase.h>

#include <clib/exec_protos.h>
#include <clib/dos_protos.h>
#include <clib/intuition_protos.h>
#include <clib/gadtools_protos.h>

struct Library *IntuitionBase;
struct Library *GadToolsBase;

void main()
{
struct Gadget *gad, *glist;
struct NewGadget button;
struct IntuiMessage *msg;
struct Window *win;
struct Screen *scrn;
int flag = TRUE;
APTR *visualinfo;

IntuitionBase = OpenLibrary("intuition.library",37);

if (IntuitionBase!=NULL)
{

GadToolsBase=OpenLibrary("gadtools.library",37L);

if (GadToolsBase!=NULL)
{


scrn=LockPubScreen(NULL);
visualinfo=GetVisualInfo(scrn,TAG_END);
gad=CreateContext(&glist);

button.ng_VisualInfo=visualinfo;
button.ng_LeftEdge=30;
button.ng_TopEdge=30;
button.ng_Height=20;
button.ng_Width=120;
button.ng_GadgetText="Don't click me!";
button.ng_GadgetID=99;
button.ng_Flags=0;

gad=CreateGadget(BUTTON_KIND,gad,&button,TAG_END);

win=OpenWindowTags(NULL,
WA_Gadgets, glist,
WA_Left,20,
WA_Top,20,
WA_Width,300,
WA_Height,250,
WA_CloseGadget, TRUE,
WA_Activate,TRUE,
WA_IDCMP,IDCMP_CLOSEWINDOW|IDCMP_REFRESHWINDOW|BUTTONIDCMP,
WA_PubScreen,scrn,
TAG_END);

if (win!=NULL)
{


while (flag)
{

WaitPort(win->UserPort);
// Wait around for message

while (msg = (struct IntuiMessage *)GetMsg(win->UserPort))
{

switch (msg->Class)
{
case IDCMP_CLOSEWINDOW:
flag=FALSE;
break;

case IDCMP_GADGETUP:
flag=FALSE;
break;

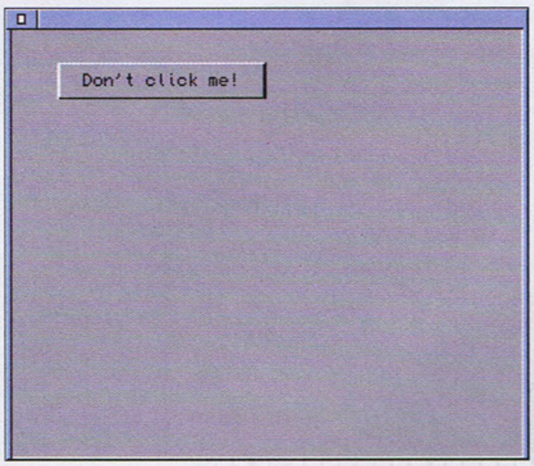
}

ReplyMsg((struct Message *)msg);
}
}

CloseWindow(win);
}

FreeGadgets(glist);
FreeVisualInfo(visualinfo);

CloseLibrary((struct Library *)GadToolsBase);
}
CloseLibrary((struct Library *)IntuitionBase);
}
}
```



Don't press this button? Like, yeah!

Under the Bonnet



Simon Goodwin unrolls the memory map for advanced Amiga users.

AFCD32:-In_the_Mag-/Under_the_bonnet/

Contents

If you've missed chapters 1-7, call our back issue hotline on 01458 271102.

Amiga systems have a bewildering variety of memory types, variously described as chip, fast, ranger, motherboard, PCMCIA, expansion and CPU-card RAM, not forgetting the vital Kickstart ROM and the ROMs on add-on boards.

> The Zorro protocol prevents such problems by assigning addresses to boards, based on their requirements...

In the beginning there was only chip RAM, confined to the first part of the 68000 memory map. Early Amigas had just 256K of built-in RAM, with the option to add another 256K inside the A1000. With commendable foresight, realising that one more pin on the memory controller would make a big difference, Commodore left space for 2Mb of chip RAM at the start of the memory map, so further memory expansion started at the 2Mb boundary, written $200000 in hexadecimal.

Table 1 shows how memory space is divided up in a 16-bit Amiga. ROM lives at the top and chip RAM at the bottom, although a circuit puts ROM at low addresses when you first turn the machine on, moving it up later so that any crucial system vectors are in alterable memory.

The original 68000 addresses eight megawords with its 23 address lines, giving a total of 2^23 = 838868 words; 16Mb at two bytes per word. Half of that space is reserved for 'fast' RAM expansion. Peripheral devices and Amiga motherboard resources contest the gap in the middle.

16-BIT FAST

The 8Mb memory area is called 'fast' because it is privately accessed by the processor and therefore not slowed down by custom chip access when lots of colours or pixels are on the screen. Zorro 2 puts small cards (devices like the Multiface or IO Extender) near the top of the map, at addresses from $E90000 upwards.

Graphics cards, requiring megabytes of space, compete for the 8Mb fast RAM area. Indeed, utilities can configure 'spare' graphics card memory as fast RAM and run programs therein, although not very quickly because of contention from the video circuits.

Problems occur if two devices attempt to respond to the same address. At worst, both of the devices and the computer may be damaged. You'll typically get erratic results or one will over-ride the other. The Zorro protocol prevents such problems by assigning addresses to boards, based on their requirements and the space available.

A few A500 cards ignore Commodore guidelines and leap in at fixed addresses. For example, Action Replay puts ROM and RAM at address $400000, limiting my A500 to 2Mb of fast RAM.

32-BIT FASTER

Amigas with 68020 and later processors have a 32-bit data bus, gaining access to two 16-bit words at a time. This bus was held back by 16-bit memory, 'fast' or otherwise, requiring two access cycles to deliver each 32-bit-long word. Real 32-bit memory was required to keep the processor working at top speed, either in place of the original chip RAM on A3000 and AGA systems, in the old 8Mb expansion area, or at new addresses above the 24-bit limit of the 68000.

The resultant memory map, shown in Table 2, starts with the 16Mb Zorro 2 area, followed by 4,080Mb of virgin space available to 32-bit addressing. However, a standard A1200 or CD^{32} needs processor expansion to reach beyond the first 16Mb.

PCMCIA BOTTLENECK

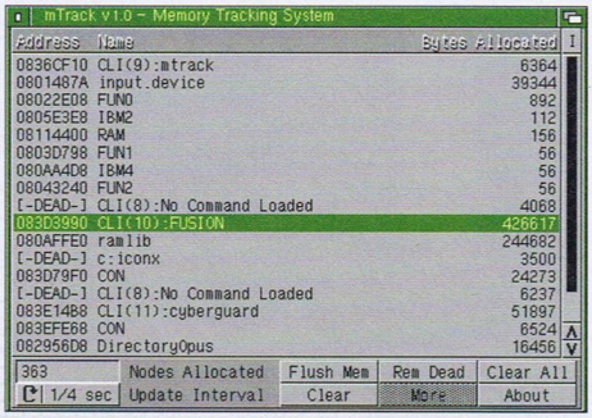
PCMCIA stands for 'Personal Computer Memory Card Industry Association', or 'People Can't Memorise Computer Industry Acronyms'! This port was introduced on the CDTV and refined for the A600, supporting 16-bit laptop memory cards. The snag is that memory intended for PCs is rather sluggish, requiring a 'wait state' to keep up with the Amiga.

As a result, PCMCIA is a bit slower than real 'fast RAM' or chip RAM on a lightly loaded system, but at least it allows expansion beyond 2Mb chip RAM in the otherwise sealed A600. Commodore allocated space for up to 4Mb of PCMCIA expansion in the middle of the area originally reserved for Zorro 2 fast memory.

The semi-custom chip GAYLE can disable the PCMCIA port, allowing up to 8Mb of main memory expansion.

ON THE CD

Loads of things to shuffle, monitor, prioritise, reassign, report and generally mess about with memory.



***MTRACK*, on Aminet and our CD, records the memory allocations of each task.**

16-bit Amiga Zorro 2 Memory Map

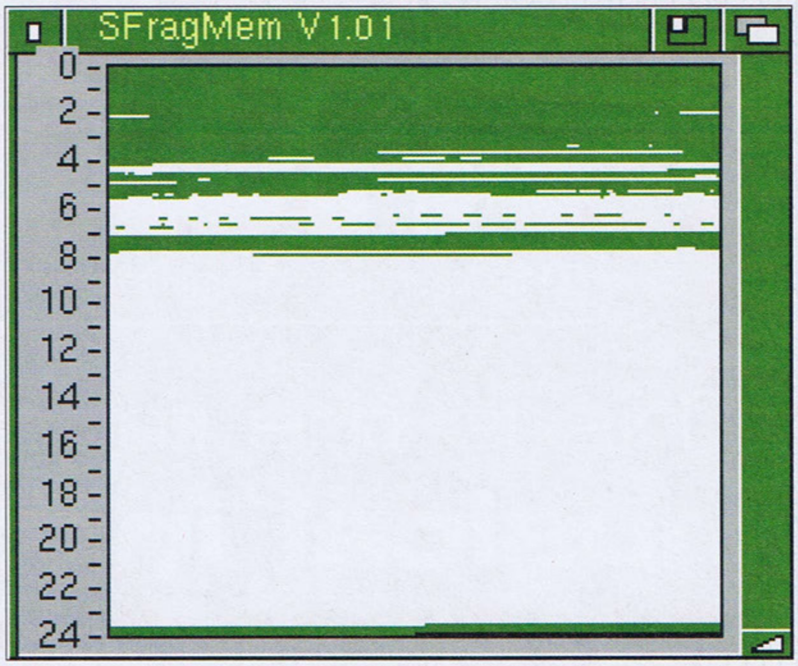
HEX ($)	DEC (K)	DESCRIPTION
00 0000	0	Chip RAM/ROM during cold start
03 FFFF	256	End of standard A1000 chip RAM
07 FFFF	512	End of A500/1000 512K chip RAM
0F FFFF	1024	End of A500+/A600 1Mb chip RAM
01 FFFF	2048	Upper limit for ECS/AGA chip RAM
02 0000	2048	Start of Zorro 2 expansion memory
04 0000	4096	Action Replay cartridge ROM & RAM
06 0000	6144	PCMCIA memory expansion (4Mb)
9F FFFF	10240	End of 8Mb expansion RAM space
A0 0000	10240	Zorro 2 I/O and PCMCIA 'attributes'
A2 0000	10368	PCMCIA expansion input and output
A4 0000	10496	CDTV credit card expansion status
A6 0000	10624	PC bridgeboard input and output
A8 0000	10752	Reserved for C= 'Workbench' ROM
B8 0000	11776	A2000/CDTV motherboard registers
BF 0000	12224	Complex Interface Adaptors (CIAs)
C0 0000	12288	Ranger slow-fast expansion space
C7 FFFF	12800	Limit of 512K A500 slow-fast memory
D0 0000	13312	PC bridgeboard shared memory
D7 FFFF	13824	Limit of 1.5Mb trapdoor expansion
D8 0000	13824	'Spare' A1200 motherboard decoding
D9 0000	13888	Reserved for A1200 internal network
DA 0000	13952	A600 and A1200 internal IDE ports
DB 0000	14016	Reserved for external IDE expansion
DB FFFF	14080	Limit of '1.8Mb' trapdoor expansion
DC 0000	14080	A500 (etc) real-time clock registers
DD 0000	14144	A3000 Direct Memory Access control
DE 0000	14208	A3000 Gate Array and ID register
DF F000	14332	Amiga custom chip registers
E0 0000	14336	CD32 extra ROM space (512K)
E8 0000	14848	Zorro autoconfiguration area (64K)
E9 0000	14912	Zorro peripheral expansion (448K)
F0 0000	15360	Diagnostic/Cartridge ROM space
F8 0000	15872	Kickstart 2 and 3 area, 512K ROM
FC 0000	16128	Start of Kickstart 1.2 and 1.3 ROM
FF FFFF	16384	Top of the world – end of the ROM

TABLE 1

32-bit Amiga Zorro 3 Memory Map

0000 0000	Start of chip RAM (as 16-bit)
00FF FFFF	End of Kickstart ROM (as 16-bit)
0100 0000	96Mb, A3000 motherboard space
0700 0000	16Mb, A3/4000 Motherboard RAM
0800 0000	128Mb, 32-bit memory expansion
1000 0000	1,792Mb, Zorro 3 card expansion
8000 0000	2Gb reserved (for virtual RAM, etc)
FFFF FFFF	End of 32-bit Zorro 3 address space

TABLE 2



A4000 memory allocation – note the gaps at the start vacated by earlier programs and *QuickROM*'s 512K 'reverse' allocation at the end.

Carddisk.device provides little-used disk emulation on removable cards with permanent memory.

The PCMCIA standard supports interrupts and input and output ports, but no DMA. This is because cards cannot move data automatically, completely crippling PCMCIA samplers and grabbers.

PCMCIA made sense on the A600 with Kickstart 2.05, but caused trouble when the same port was built into the 32-bit A1200. The 16-bit bottleneck left PCMCIA memory a fraction of the speed of real fast memory in the A1200 trapdoor slot and the addresses clashed, blocking PCMCIA access on systems with an 8Mb expansion.

CPU LOCAL

The solution, as on the big box Amigas, was to extend the A1200 with 32-bit memory beyond the Zorro 2 address range. This is local to the processor, on the accelerator card, for speed. It facilitates a custom interface for '040 and '060 systems, faster than '020-style motherboard signals which adapt dynamically to the demands of 8- and 16-bit devices.

Some boards put CPU-local memory in the next 16Mb area, starting at address $01000000. Others follow the A3000 and use $07000000..$07FFFFFF, the 16-Mb motherboard space, or upwards of $08000000, like Zorro 3 accelerators with local memory. This includes Warp Engines and Cyberstorms.

You can still buy simple RAM expansions and budget accelerators, like Power's 1230 Turbo LC, which put RAM in the Zorro 2 space, clobbering PCMCIA, including Ethernet, Squirrel and simple RAM cards. The solution is to buy an accelerator which implements full 32-bit addressing, pushing the upper limit from 16Mb to 4,096Mb – quite enough, for the time being.

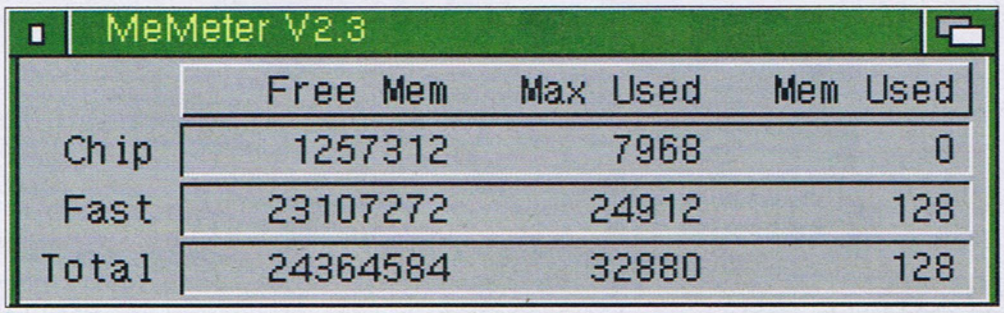
The 32-bit Amiga address space is shown in Table 2. The first 16Mb is allocated as on 16-bit Amigas (for compatibility) while the second half of the space is reserved for 'virtual' memory, actually on disk. This leaves a healthy one and three quarter Gigabytes for Zorro cards and 128Mb for CPU expansion RAM.

NEXT MONTH

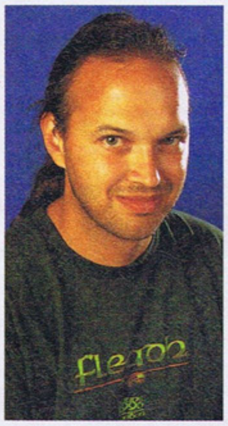
The tables on these pages reveal lots of detail about the inner workings of the Amiga, helping to avoid clashes and crashes. However, your leeway is limited because the Amiga memory map was preordained by Commodore.

As programs allocate and release memory it becomes 'fragmented', with inconvenient gaps among the spaces already used. These cause problems for programs which demand large continuous areas, typically emulators and 'interleaved' screens which combine bitplanes in one area for faster blitting. Worse, some programs 'leak' memory, allocating it but never releasing it.

Modern Amigas have 'memory management' hardware that can monitor and shuffle areas of address space. This is a powerful but poorly documented facility, which I'll explain in unprecedented detail next month, with practical examples. 68040, 68060 and full (not EC) '030 owners, and potential upgraders, can't afford to miss this part of our in-depth series.



MemMeter tracks maximum and current allocations as you start and stop programs.



MailBag



Send your letters to: **Letters To The Editor • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW** or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

✗ SPARE US	SEND US ✓
Questions about Workbench 3.5	Your ideas for Workbench 3.5
Technical questions (which should go to Workbench)	Letters about the Amiga market, the mag or your experiences
Heartfelt expressions of how really great *CU Amiga* was	Your sensible suggestions on how we can improve *AF*
Letters about Andy Smith being wrong	Your own game reviews
Questions about the Millennium Bug	Suggestions for the Millennium Dome
Illegible nonsense	Legible sense

COLIN NOT TO BLAME

To achieve a perfect world I would like to see two things. The first is the removal of all Microsoft products and the second is the elimination of every mistake in *Amiga Format*. One of these is probably quite impossible and the other Bill Gates might not like.

The elimination of every mistake in *Amiga Format* might happen one day, but not in issue 114. I found three mistakes!

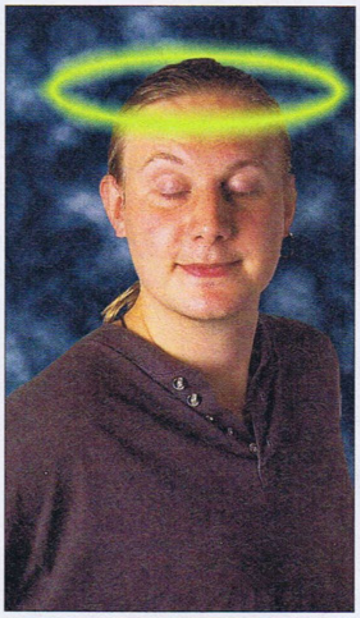
Firstly, it's you, the 'spreadsheet supremo', who has made an error. You said in the survey results that 40% were planning to follow the *C* tutorial and your graph showed that 40% don't plan to follow it. You can't have it both ways.

Then it was the turn of Reader Ads. One of the adverts in the Wanted section is quite clearly a For Sale ad. Finally, you seem to be splitting your adverts like some people split their infinitives (although only English teachers care about that).

Epic Marketing, who normally have such a lovely double page spread, found themselves on pages three and 59. Doh! And don't blame it all on Colin… Also, when are you going to do a full review of *Napalm*?

Mark Weldon
Wigston

To your first point, it's a fair cop. In actual fact, 59% of readers were following the tutorial. Colin was in no way to blame for this and I accept full responsibility.



Colin, and the expression he all too often adopts when supposedly working.

Reader's Ads are typed in and meticulously checked by Mark. I'm not sure if the miscreant here might not have been the reader in question, who may possibly have ticked the wrong box on the form (you wouldn't believe how often this happens), but I suppose it should have been checked out.

Finally, the responsibility for the misplaced ad rests somewhere outside our four walls. Either the film was marked up wrongly or someone simply put it in the wrong place. I suspect we'll never know.

We do try hard to eliminate mistakes, but you have to realise that there is only one Colin and he can't do everything. We do all try to be as accurate and perfect as him, but we are only human after all.

AUTO POWERUP

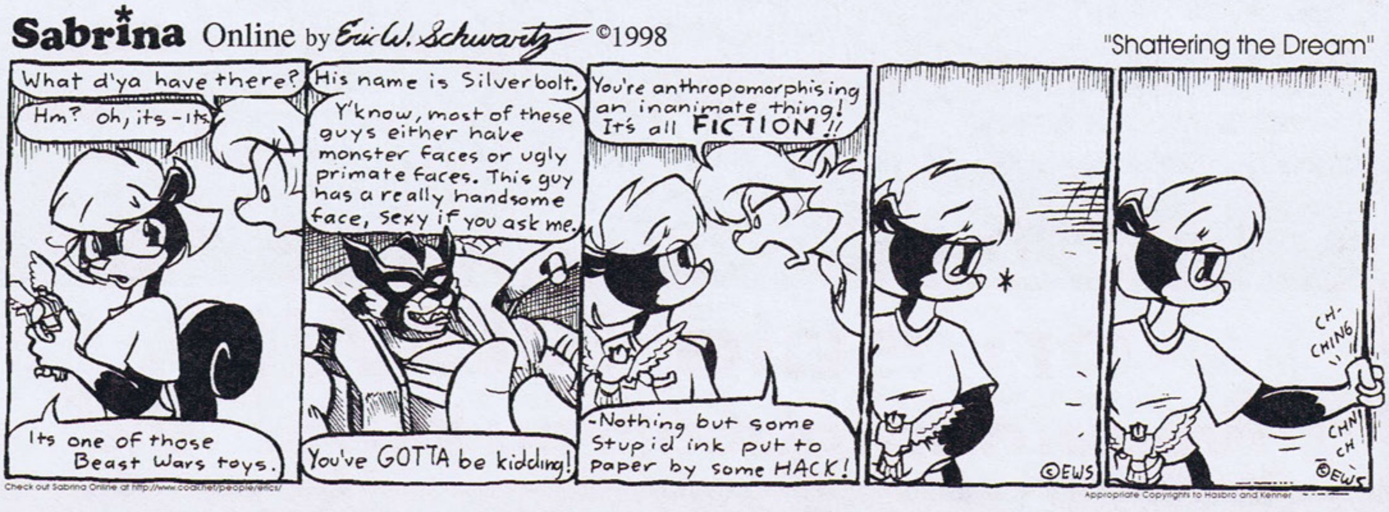
As the move towards a PowerPC-based Amiga is looking more and more likely, the amount of compatibility with older software becomes more in doubt.

I have a question that seems feasible but I don't have the programming experience to validate it. Here is the background to my question.

1 There are 68K disassemblers that take apart executables and turn them into assembly source.

2 There are assemblers that take this assembly and turn it back into an executable binary, with the possibility of optimising it for a certain processor, such as 68040 versions of software.

3 There is likely to be a PowerPC assembler available now or at some



PAYING BY INSTALMENTS

After reading the results of your survey in *AF114*, two things came to mind. Firstly, you say there is a slightly greater take-up by the more mature reader. Good! As a fifty eight-year-young who still has a copy of *AF33* from April 1992, it is excellent to see that I'm not entirely alone.

Secondly, the comment by one reader about wanting a monthly direct debit interests me. As the more mature reader is increasing, I wonder if there are others in the same position as myself. My average income is a tad over £3,000 as I am unable to work because of disabilities.

As you can see, I'm unable to afford the lump sum direct debit, but I could afford a monthly direct debit. You may get more subscribers this way; people like myself and students possibly. Anyway, thanks for an excellent magazine.

R. G. Perks
Dinas Powys, Wales

We have considered this before, but unfortunately it would involve extra costs, effectively meaning that the magazine could well end up being more expensive. Sorry.

point in the future, so my question is this: would it be possible to write a program that disassembles 68K executables, turns them into 68K assembler source, converts that into PPC assembler source and then compiles that source into a PPC executable binary?

Dave 'Newky' Humphreys
newky@ukonline.co.uk

An interesting premise which would work as far as the theory goes, but for a few points:

1 Disassemblers are never 100% accurate when dealing with complex software. It's very unlikely you'd be able to take the code generated from them, assemble it and expect it to work straight away. There are always gaps and ambiguities. It can be done but you'd need an experienced programmer to look through the code.

2 Optimising for the PPC is different from optimising for a 68K processor. Again, it is something which is best done by an experienced programmer.

3 If you're suggesting that some software could be sold which would allow you to recompile existing applications for PPC, I think there could well be some legal ramifications involved.

So, it's a good idea, but one which I don't think is ever going to work very well.

PAINLESS

I was pleased to see the review of *NetConnect 2* in *AF114* as I was wondering about getting online and how complicated it might be. After reading your review, my fears were allayed. I have since bought *NetConnect* on CD and have gone online with Demon Internet.

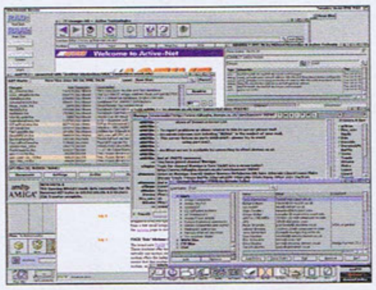
I would like to assure other readers who are thinking about going online that this is a very painless way of doing it and that the service from Active Software is first class. I have also ordered *STFax* and I'm very pleased with their prompt dispatching. My copy arrived the day after I had ordered it.

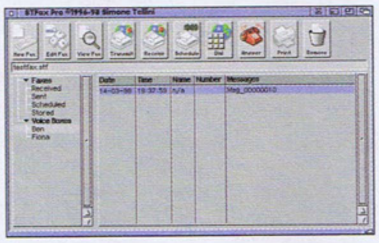
Their technical support is also worth mentioning as I've phoned them a couple of times when I've been stuck and they couldn't have been more helpful, even when the problem might be something daft. Well done Active.

This brings me to my next point. How about running a tutorial on *NetConnect* and *STFax*? I believe they can work together with the *Contact Manager*.

Keith Larwood
Romford

I'm glad you agree with our review. As for a tutorial, I think it might be a bit specific and limited for a whole series, but we could arrange a one-off tutorial on this subject. You can expect to see it in a future issue.





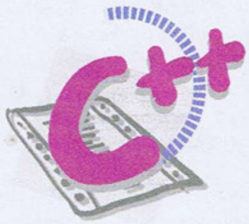
The easiest way to get online? Write in and let us know.

OVER THE TOP

I've been a keen follower of both the *C* programming course and the Under the Bonnet series, although I must ask for more coverage of a couple of topics that may increase the user's ability to understand the OS even more.

Firstly, in the article about device drivers and handlers, I'm interested in creating my own set of programs to extend the actual scope of the disk handling ability of the Amiga. For example, 12-15 sectors per cylinder and 80-100 cylinders per side – 960K-1,500K on a DD disk.

With respect to the *C* programming course, I possess HiSoft's *C++* and I'm interested in the addition of the Cephes mathematics libraries and enhancement of the existing header files by adding in more constants that appear in other *C* packages. How is this done?



Also, while waffling on about *C/C++*, is it possible for you to run a series on the extension of the types already in existence, along with how to integrate assembly routines into *C* for time-critical routines?

In connection with the programming section of your magazine, the following might encourage more people to become masochists – listings of selected programs from readers, along with a section on what each function in *C* and assembler does.

Clive Seaden
Foxhole

In order to actually understand the device drivers, you really need to get hold of either the Rom Kernel Manuals *or another programming reference book. Even something like the* Developer CD *can provide you with insights into device programming.*

The problem with capacity on the disk

Continued overleaf ➡

Sabrina Online by Eric W. Schwartz ©1998 "Muffled Revelation"



Check out Sabrina Online at http://www.coax.net/people/erics/

drive is not purely down to the device handler. There are physical limitations involved too. For a start, there is the resolution of the ferrite particles on the disk which determine just how many bits of data you can store on it, as well as things like the speed of the disk, and indeed the design of the stepper motor which moves the heads in and out (i.e., you couldn't get 100 tracks unless you used a completely different motor).

We are quite happy to include source code from readers on our CD, but frankly, long code segments take up far too much space in the magazine and you can't really expect people to type them in.

You can, of course, define your own constants in header files, but you're better off including them in your own headers rather than altering the "official" ones.

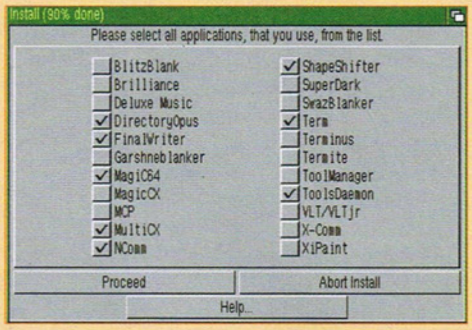
EXECUTIVE ACTION

This may be the wrong place to send this to, but it's my best shot!

In chapter seven of Under the Bonnet, in the *Executive* box-out, Simon Goodwin claims that *Executive* clashes with PowerUp. This is strange considering I've had no problems at all with my A1200 with PPC603e/240Mhz.

In the same box he reckons "many" programs have problems with *Executive*. I would say very few (maybe 0.1% to 1%) do. Unlike many other patches, *Executive* is a wonderful program, so I can only assume he had very bad luck. It's certainly a top 10 utility in my opinion.

***Executive* is the best utility of its type. In fact, it's the only one. I've experienced a number of problems with Executive running on the CyberStorm PPC/'060, which usually result in PPC tasks hanging, presumably because the delicate timing between the '060 and PPC has been interrupted. I think, as Simon says, if you spend the time and effort to understand the program and set it up to suit your needs and your software, it can be a great boon.**



Executive does require you to put in a bit of effort, but the result can be a speedier machine.

WRONG ADDRESS

This letter is probably more suited to Workbench, but that doesn't seem to take emails. I have a CD^{32} connected to an SX-32 Mark 2, effectively an A1200. Some time ago I fitted an 810Mb HD inside. It was great until a couple of weeks later when it went all wrong.

After a bit of investigation, it turned out there was no good reason for its self-destruction. I managed to sort it out with the people I ordered it from, but all its contents were lost. That wasn't so bad as there wasn't much on it anyway, but after reading *AFCD* submitters' readme files and hearing that many people have had similar accidents, I realised only good luck would prevent it from happening again.

To make sure I don't lose any crucial work if it happens again, I'll have to back up all the data. I thought a Zip Drive would be good for this, but I don't know if one of those would connect to any of the ports on my SX-32 Mark 2. Parallel, serial, video, VGA, disk drive – what would fit? A SyQuest drive? An LS120? What?

Please, please, please print this letter as you've never printed any of my previous letters.

Stu MacDonald



IDE or SCSI Zip drives are an ideal backup solution, especially as prices have just tumbled.

Well, you could get an IDE Zip drive and mount it, via a splitter, with your hard drive. Eyetech or Power can help you out here. You can email Workbench: simply send your questions to amformat@futurenet.co.uk and put Workbench in the subject line.

BIG IDEAS

I've had another idea to make the Amiga the number one computer to buy. Please could you make sure that Amiga Inc. know about my idea as it could increase sales by a few million.

The year 2000 is only a few hundred days away and so is the release of the next generation Amiga. It is said that the millennium bug will cost all industries millions. The Amiga will be launched just in time for Amiga Inc. to promote the machine as a low cost computer to replace millennium bug infected PCs.

This strategy will only work if Amiga Inc. make sure that people know the Amiga can read PC files and that high standard, serious software is available at the launch. If everything goes to plan, businesses will buy Amigas to replace millennium bug infected PCs (and Macs?), simply because the machine would be cheaper and have more power than its competitors.

The Amiga would also be able to read files from the millennium bug infected PCs, which would be the main reason for a business to buy a replacement computer.

When Amstrad were in the process of launching the CPC, they gave free prototypes of the CPC to several software companies to convert 40 of the best software titles from the Spectrum and C64. Amiga Inc. should do the same for the Amiga.

This should make the Amiga wipe the floor with the Dreamcast, N128, Project X (1.5mips and no polygon capabilities) and PlayStation 2, as the Amiga would have more software, more power and more CPU than the consoles above, which will all be released at about the same time as the Amiga.

The Amiga must be released with a DVD drive as this type of media can hold more data than a CD and would lead to better quality software. As Project X is to be incorporated into DVD players, its competitors should too. The Dreamcast will only be able to display three million triangular polygons, compared to the Amiga's 400 million polygons. Long live the Amiga!

Finally, could you put a *C* compiler on the coverdisk as I'd like to write software in *C* but don't have a CD drive.

Leon Brown
Liverpool

Thanks for your ideas. Unfortunately, C *compilers tend to be rather large, so I don't think we could get one onto the floppy disk. If you really want to get into* C *programming, you'll probably find that a CD drive is actually indispensable.*

STATTO'S CORNER

While looking through your latest magazine (issue 114) I was interested in

GOING UNDERGROUND

A couple of years ago I had a letter in *Amiga Format* asking for music composers to help me out with some mods for a computer generated video I was working on.

Firstly, I would like to thank all those who contacted me, although I think I wrote to them all myself. Secondly, I would like to inform you of the success that the production has had. It was shown at the John Hopkins Film Festival (Baltimore, USA) and is part of the EuroUnderground Tour, a touring festival of experimental films which visits European capitals. Closer to home, it will be shown as part of the British Short Film Festival in September.

What is important here is the fact that these festivals deal with film and video, not just computer graphics. The film ends with the statement: "No Microsoft products were used," and people really seem to have taken to that.

Most short film festivals are interested in experimental and underground work and they now perceive the Amiga not as out-of-date or underpowered, but rather as an underground computer, used by artists who shun the system, in the same way that Super 8mm cine film is still used instead of video.

Make of it what you will but it's an interesting view.

Tim Clague

Thanks for keeping us up to date.

your article, "Survey Results". Could you provide me with a detailed guide as to how you entered the results and displayed them, and which software you used and how it was set up?

I'm especially interested in which software you used to actually enter the data from the questionnaires.

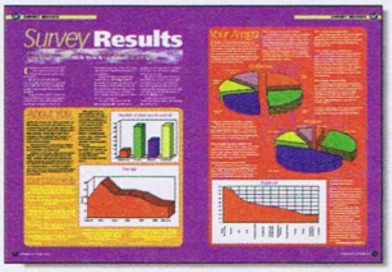
I ask as I'm about to go back for my final year at University where I'm doing a statistics degree, and I'm interested in any software capable of entering and displaying statistics on the Amiga.

G. Milne

The survey results were compiled by our market research department, who don't use Amigas, I'm afraid. I'm sure they used some custom software designed for the job and I don't think any software of this type is currently available on the Amiga.

As for the graphs, they were done in a variety of ways, mainly using Final Calc. *This also has a lot of statistical features and it's probably the best Amiga software for the kind of task you are considering.*

If you're looking for serious statistics packages to run on your Amiga, your best bet would be to install NetBSD *and to run some of the many and extremely capable,* Unix *statistics packages.*



Mmm, graphs. Pretty. You can do all this in *Final Calc*.

FLYING HIGH

Following your rave review of the Power Flyer in *AF113*, I rushed to Power Computing and duly received and installed it to my A1200. Being familiar with electronics work, the fitting of the board didn't worry me. However, I did strike a few snags that really ought to be mentioned, especially as they weren't covered in your review or the rather sketchy instructions supplied.

Following the dismantling of the computer, the instructions imply that the top metal shield is relegated to the bin as no further mention of it is made. I find this a bit careless as with a little judicious cutting with craft shears or even strong scissors, it can be made to refit to its original position, thus preserving its protective role against RF and coffee. It may also (as in my case) be needed to supply support when re-installing the original HD drive.

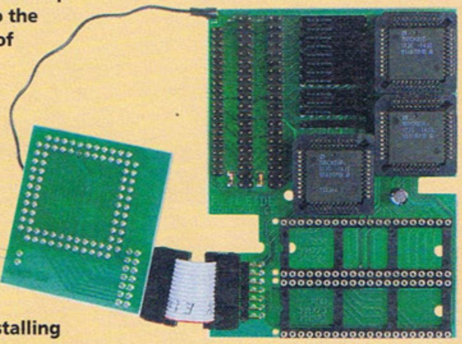
The next point concerns the HD cradle. The main Power Flyer board, once fitted, prevents this from being re-installed. In addition, the new board is now very much to the right of the old IDE pin array and occupies a position lower and to the centre on the A1200 board. All this means that your HD has to be turned 180 degrees and with the usual combination of DIY stuff, must be wedged under the keyboard.

Perhaps most serious of all is if you have an early A1200 revision board. In my case this is 1.0E. If so, you'll find that approximately half the pin array of the clock port is now underneath the Flyer board, definitely not usable for Catweasel.

Even more serious, once the board had been firmly pressed home, one of the clock-port pins made a perfect short onto the underside of the board (at a soldered junction of the mini-can electrolytic). The only remedy was to splay both rows of pins to about 45 degrees.

I know it's early days for this new product (as I think Power Computing realised when I phoned them) but I believe, for the sake of less experienced owners, your initial enthusiasm should in future be tempered with much more caution or research. My initial reaction is good, although I don't have the fastest of internal HD drives fitted. In my opinion, this is definitely one bit of kit for tower users.

John Reed
Attikis, Greece



Is it the root of all evil, or just a very good bit of hardware?

I'm really sorry I didn't mention the shielding, but it is understandable because I can't remember the last time I saw the shielding in any of our Amigas. We've never had any problems with interference, probably because the entire building is full of stuff which interferes with everything else anyway.

Few people seem to have 2.5" drives in cradle's anymore either, and to be honest, the Power Flyer is really of more interest to tower owners anyway. You aren't going to get four devices inside the casing of your A1200 and the older 2.5" drives which came installed in the A1200HD models aren't very fast anyway.

We did mention the clockport in the review. It is a tricky subject though as, typically, various different models of A1200 had different versions of it, and some didn't have one at all. Only the rightmost 22 pins are useful and the manual which now accompanies the Power Flyer tells you what to do in each case.

I'm afraid we are slightly limited in that we don't have all of the endless variations of all the different A1200 revisions here to test everything on, and some problems aren't discovered, even by the manufacturer, until the unit is in circulation.

FAREWELL CU AMIGA

Well, it looks as if you're the last Amiga magazine left from a once grand line up (*Amiga Computing, Amiga User International, CU Amiga, Amiga Shopper,* etc). They're all gone, so it makes me wonder how long you are going to last. Hopefully all Amiga owners will rally behind you, and although that isn't the massive amount it was some years ago, it must still make a reasonable quantity of readers and buyers.

Well, enough depression and on to my main point. In recent magazines, people have written in to you to complain about the latest decision by Amiga International, and in return you have toed the company line and backed them 100%. Well, good for you!

We should all back Amiga International 100%. However, I think you have missed the point of most people's complaints. Early this year, AI announced that the next Amiga would be PPC based. "Hoorah," shouted the Amiga public, "a decision." Then AI said that a new version of Workbench, and possibly new custom chips, would be available before the end of the year. The Amiga public checked their bank accounts and said, "Hoorah, state of the art, here we come again."

Then a couple of months ago AI said PPC would be part of the classic Amiga range and a new and more powerful machine would be available in a couple of years. "Boo," said the Amiga public. "That's the next century and we want new machines now – we've been waiting since 1992."

In a couple of year's time the Amiga market will have shrunk even more and AI will have to start from scratch (or as good as). At least at the moment there are still a lot of us die hard owners still here waiting. So all I can say to both yourselves and Amiga International is please back PPC, please bring out a new version of Kickstart and Workbench, and please, please give the Amiga some more support before I'm forced to use the PC that's sat on my desk more than I use my Amiga.

Thanks for all the great work you've done (I've read *Amiga Format* since issue 1 (and *ST/Amiga Format* before that.) and keep the great (and highly useful) magazine up.

F.J.Moody@Venom8.demon.co.uk

CU READERS WELCOME

Now that the demise of *CU Amiga* is imminent, will you be welcoming all those lost souls with only *Amiga Format* as an Amiga haven to your magazine with an official, printed welcome?

James Buckley

SUPPORT THE AMIGA!

I am saddened by the decision of EMAP Publications to shut down *CU Amiga* but I guess they have a right to make money from selling magazines. I bet the directors of Future Publishing are rubbing their hands together with glee now *CU Amiga* is closing down.

I hope *Amiga Format* does stay with the Amiga and I hope you will make a bigger magazine for all of us Amiga

Continued overleaf ➡

users, and gives us more reviews of products and more impartial advice on purchasing products that you review. Keep with the Amiga or Amiga owners won't have the information on products that are just coming out.

As for people leaving the Amiga to join the Wintel revolution because of the demise of *CU Amiga*, more fool them. My advice to all Amiga owners is to support the Amiga and buy *Amiga Format* or else the Amiga won't have a publication or magazine that non-Internet users can get hold of, let alone have one with great reviews and advice about Amiga hardware and products. I hope I've put my point across and not inflamed the situation of Amiga users.

via email
AnthonyRhodes@compuserve.com

GOODBYE CU. GOODBYE AF?

I have been disturbed to note that your only UK rival, *CU Amiga*, has now ceased production, and this leads me to something of a dilemma. I have been prompted to check *AF*'s distribution figures and I'm concerned that they're similar to those enjoyed by *CU Amiga*, and they've dropped by 30% since September 1997. Hence my dilemma.

With little action from Amiga International at the moment (other than a few vague announcements), and the only source of information for all things Amiga being yourselves, can the platform be realistically expected to survive the 18 months that AI are asking for? Even more importantly, can *Amiga Format* be expected to survive?

The hardware and software companies that make Amiga products rely on advertising to sell their wares. Without the advertising, they don't make money and so lose faith in the market and cease production. Available advertising space has been cut in half, which will accelerate this process.

If companies pull out of the Amiga market, *AF*'s revenue drops and the magazine becomes less feasible. If this happens, the magazine closes down, all advertising space vanishes, developers pull out of the market and the platform dies. And now my question. How long can *AF* sustain itself for, and how much of a drop in circulation (though certainly in the short term I would expect a small increase) can you stand before this scenario becomes a reality?

I have championed the Amiga's cause at every opportunity and would dearly love to see the platform have a real chance at a future, but right now I'm in the throes of trying to decide whether it's time to sell up while I still can and get myself a PC, something I'm loathe to do.

Some reassurances would be nice. Sorry for rambling, but I really am genuinely worried.

Steve Hargreaves

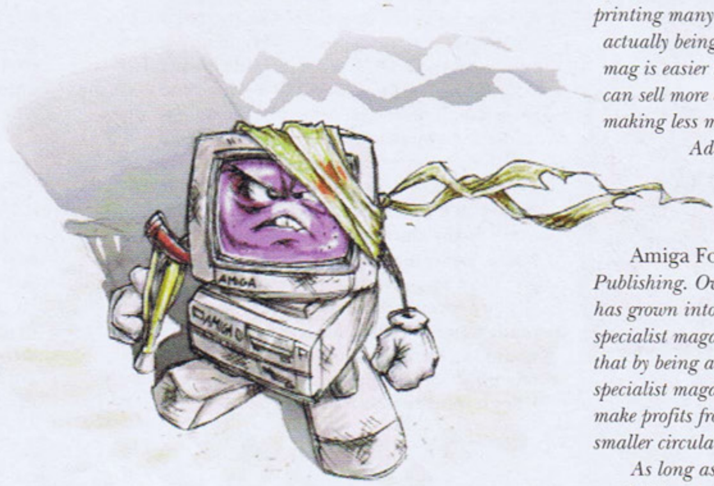
CU AMIGA: A VICTIM OF MARKET FORCES

I don't often put pen to paper these days but just now if I don't say what I really think, I know I'll kick myself from then until breakfast time, or whatever the saying is.

The sad news that *CU* have had the plug pulled by their owners, EMAP, was surely not unexpected. If a commercial venture is in deep trouble then it is sensible to leave no stone unturned to try to stem the outflow.

I was discussing the market with a good friend, one of the major suppliers to the Amiga, and asked him why he supported *CU*. He replied that it was because their advertising rates were so much lower than the opposition, but it didn't do them any good, did it ?

When our favourite mag started to use paper of not such good quality to cut costs (what a sensible decision – it's the content that counts, not glossy paper) did they follow suit ? Methinks it would have been a sensible management decision, but they obviously didn't.



We promise to do our best to continue championing the cause of the Amiga throughout the world, for a long time to come.

The Survivor.
AMIGA

Enough of what didn't happen, though. Now for what we should, indeed must, do. And when I say we, I mean both advertisers and readers. If the people who advertise don't continue advertising, how do they think they are going to reach the end-users to sell their products?

If the readers who supported *CU* don't now switch allegiance to *AF*, and if a lot more people don't start subscribing, with the best will in the world our favourite mag will go the same way and then we're all stuffed.

With no Amiga mag and nobody to ask about problems, it doesn't take a genius to see what will happen to those of us totally dedicated to *Amiga Format*.

I'm sorry to say it here but I really think (this is an entirely personal opinion) that Amiga Inc., Gateway 2000 et al are now, and always have been, a load of [expletive deleted], with no real interest in us as Amiga users or in the miggie as a computer.

I'm sure they have some devious plan for the Amiga Technology, such as it is, but I'm certain it doesn't include us, the Amiga Community, or the Amiga as we know it now. Anyway, long live the Amiga.

Ian Aisbitt

This is just a small selection of the letters we have received about the closure of CU Amiga *and there are a few things I would like to say on the matter.*

Firstly, let me reassure everyone that Amiga Format *is not in any danger of being closed whatsoever. This is because it is still a financially sound business proposition and it still makes a useful profit. Unfortunately,* CU Amiga *didn't manage to stay profitable for several reasons.*

Firstly, their issue efficiencies were very low until recently. They were effectively printing many more copies than were actually being sold. While this means the mag is easier to find, and consequently you can sell more copies of it, it does mean making less money overall.

Added to that, although CU Amiga *had more advertisers, they were all paying relatively little for their ads.*

Amiga Format *is published by Future Publishing. Over the last ten years, Future has grown into one of Europe's leading specialist magazine publishers. It has done that by being able to successfully publish specialist magazines and by being able to make profits from titles which typically have smaller circulations.*

As long as there are people in the marketplace to produce and advertise goods, and as long as there are enough people who want to read about them, our magazine will continue to be published.

I can't say that Amiga Format *will definitely be here in 18 month's time because, quite simply, that's too far to predict. What I can say for sure is that* Amiga Format*'s future is as secure as any other title which Future publish.*

I would like to welcome the readers of CU *to our pages. We might do things a bit differently here but I'm sure you'll get used to it, and feel free to write in and tell us if you think we're doing something wrong.*

I would also like to welcome some of CU*'s writers to the magazine. The closure of their title was in no way a reflection on their knowledge, skill or enthusiasm, and I'm sure we'll all benefit from having their contributions appearing in* Amiga Format *from now on.*

Finally, Amiga Format *isn't happy with being the best Amiga magazine by default. We will continue to strive to create a magazine which is the best because nobody could do any better.*



Reader Ads

Buy, sell and exchange your Amiga hardware and software in the best free ads pages around.

FOR SALE

Amiga 4000/'040, 18Mb RAM, quad CD-ROM, second high density disk drive, speakers, multisync monitor, inkjet printer (colour), loads of software and CDs. Mint condition, £750 ono. ☎ 01203 455585.

A1200, 10Mb RAM, 170Mb hard drive, RAM/clock board with FPU, Philips CM8833 monitor/TV, magazines, coverdisks, some original boxed games/software. Offers. ☎ Robert 0958 607826.

Quake and Time of Reckoning add-on, £20. Also, 8Mb RAM chip, £5. ☎ 0118 9701483 (Basingstoke).

A1500, CD-ROM, two disk drives, Workbench 3.1, monitor, trackball, mouse, over 100 disks, £95. ☎ 01273 890615.

DPaint V with manual, £10. Turboprint 5, £15. Wordworth 6, £10. Squirrel, £25. Mastering Amiga Beginners, £7.50. Chess 2175, SWOS 96/97, PM 3, Deluxe, £5 each. PrintStudio Pro, cost £29.99, accept £9. 10/10 French, £5. ☎ 01726 812340.

A4000/'060, 56Mb RAM, 4.6Gb SCSI and 1.7Gb hard drives. CD-ROM, monitor, loads of programs, £600. V-Lab Motion including Movieshop (98% *AF114*), Toccata soundcard £500. Lightwave 5 including manuals, dongle, £300. Rendale 9402 genlock, £150. ☎ 01273 890615.

Amiga 3000, multisync monitor and CD, Epson scanner, hood, HP500C printer, Podscat, Pixy 3 Plotter, CD32, A500 590 HD, flatbed scanner, colourburst, extra drives, mice, professional desktop programs, word processing, graphics and lots more. £550. ☎ 01753 818711.

Amiga ICS tower, complete with power adaptor, £60 (including p&p). ☎ Martin 0171 4952657.

Hard drive, 20Mb, 2.5", £20. Memory, 4Mb SIMM, £5. ☎ Robert 0958 607826.

A500 £20, A500+ £30, A1500 £35, Action Replay for A500 £15, Tower disk drive, TV modulator, more hardware and games. Call for details. Also swaps. ☎ Mike 01784 885914.

A1200, 10Mb, 210Mb hard drive, extra disk drive, 2x CD-ROM, magnum accelerator, printer and word processor, spreadsheet, plus other software. £350. ☎ Adam 01484-656648 (after 5.30pm).

Zip SCSI drive, £60; Squirrel interface, £40; CD-ROM, 2x SCSI, bare, £20; Amiga CM88II, £30; Blizzard 1630 FPU 6882, bare, £50. ☎ Kevin 0956 308314.

Eyetech 8x speed CD-ROM buffered IDE interface, manual, software, £75. 250Mb hard drive (internal) filled with latest Workbench gizmos and superb programs, £50. Wordworth 7, £25. Ami-Filesafe Pro version, £15. Lightwave 3.5, £50. ☎ 01405 860798.

A4000/EC '030, 18Mb RAM, 200Mb hard drive, 50MHz FPU 3.1 ROM, 12x Toshiba CD-ROM, Oktagon 2008, Cybervision 64 graphics card, 1942 monitor. Both boxed, as new. Lots of software, £700. ☎ 01653 695223 (after 6pm).

Picasso II 2Mb video RAM £85, SVGA monitor £65, A2000 '030 CPU 7Mb RAM £175, 15KHz monitor £50, the lot for £330 plus p&p. ☎ Pete 01423 526921, email sullitec@harrogate.com.

Gunship 2000 with manual. All four disks for £4. ☎ Calum 01253 853509.

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Hard drive, Seagate IDE 3.5", 1.7Gb, suitable for A1200. Excellent condition, £75. RAM upgrade for A1200, 8Mb, £30. 10 boxed A1200 games, £25 the lot, plus postage. ☎ Mark 01803 212573.

Flicker fixer for A1500, A2000, A3000 and will possibly fit into an A4000. £50 ono. Excellent condition. ☎ 01706 878596.

A600, 2Mb, 1084S monitor, additional floppy, 175Mb HD, Panasonic KXP2123 colour printer, two joysticks, software (lots of games and utilities), spare disks and boxes, manuals, leads, magazines, mainly boxed. £240. ☎ Phil 01709 559266, email ptoyne@aol.com.

A1200, 2Mb RAM, games, WB 3.0, disks and manuals, Commodore 1084 monitor, £120. ☎ Maurice 0171 7876167.

Lightwave 5.0 – upgrade for only £250 or £350 complete. Real 3D v.3 only £100. Both boxed with manuals. ☎ Trevor 01842 764038.

WANTED

1.0Gb or over HD. Will pay up to £30 (internal please). ☎ 01752 205382.

Gloom program disk. My original program disk has a Checksum error. Can anyone help? ☎ Robert 0958 607826.

Amiga 1500 soundcard required. Delfina Lite, Toccata, AD516 and any software. ☎ Michael 0171 2638882 or 0958 256769 (North London area).

The LightWorks CD-ROM, any Movieshop Effects disks, Real 3D v.3+. Buy or trade across the pond. zaxxon@primenet.com.

A4-size desktop scanner for the A1200, with software. Colour. Willing to pay a good price. ☎ 0181 3665405 (evenings, ask for Roy).

Design Works for Amiga 1200 CD-ROM or floppy disk. Reasonable price paid. 8 Alan Close, Dartford, Kent, DA1 5AX.

SCSI module for Blizzard 1230 IV. Call with price, will collect. ☎ 01724 847958.

Hardware and software (serious) for A1200. Deluxe Music 2, Wordworth MIDI interface, sampler (16-bit) etc. Broken A1200 and other items also considered. Will buy or swap. ☎ 0161 7373356.

Desperately wanted: CD32 version of Beneath a Steel Sky. Will pay a fair price. ☎ Adam 01425 610989.

Help please! I have an A1500 without any system disks. Can anyone give me any copies to make it work? ☎ Colin 01423 566842.

SAS/C with manuals, etc. ☎ Paul 01705 680226.

Sierra Software's Police Quest 2 and above for A1200. Write to Ross Whiteford, Cordon Mains, Abernethy, Perthshire, Scotland, PH2 9LN.

Final Calc spreadsheet program by Softwood Inc. USA, with manual. Will pay £100 for good condition. ☎ 01905 641222.

Stunt Car Racer, Battle Squadron, Flood, Supercars 2, Rick Dangerous, Player Manager, Star Wars, Murder, Battlechess, Steve Davis Snooker, Wembley International Soccer A1200, Hill Street Blues, Barbarian. ☎ Lee 0113 2713532.

Space Crusade game for A500. ☎ David 01792 424428.

Amiga reference manuals 2.04 onwards. Also Prograb RT24 Plus. ☎ 01327 351140.

Disk 1 for Breathless and the CD32 version of Super Streetfighter 2 Turbo. ☎ 01226 384796.

Knights of the Sky, WWI flight simulator. ☎ Dave 01905 830015.

DOpus 5.0 and any version of Amiback Tools and/or Amiback, including manuals please. Write to Mr. G. Dixon, 19 Mountbatten Pavilion, Aylesford, Kent, ME20 7SE.

Manual for Deluxe Paint III. ☎ Eric 01803 842253.

PERSONAL

Also see the AmigaAngels document on our CD.

Corrupted disks: If you need your floppies fixed, I might be able to help. Send two 20p pieces with each disk to G. Dixon, 19 Mountbatten Pavilion, Aylesford, Kent, ME20 7SE.

Amiga contacts wanted to exchange games, hints and ideas. Contact Mr. Michael Saywell, 87 Eastern Avenue, Liskeard, Cornwall, PL14 3TD.

PD lists for swapping PD by post. Please write to Grenville Dixon, 19 Mountbatten Pavilion, Royal British Legion Village, Kent, ME20 7SE (WB 2/3.0 only).

Help! Is there a good Samaritan who can help a novice A4000/'030 owner install PC Task 4.2? I would be very grateful. ☎ Glyn 01922 693558.

Amiga helpline, most problems solved. Send a cheque/PO for one pound, payable to J. Seeney, plus SAE, to J. Seeney, Amiga Helpline, 6 Station Street, Wakefield, West Yorks, WF1 5AF. Any problems welcome!

I'm looking for assembler or any other programming languages for my A1200. Anyone able to help me? I'm also desiring friendly correspondence. Send letters to Jury Mikheev, Naumova 30-1, Kirensk 2, Irkutskaya, obl, 666710, Russia.

Help wanted to install Windows 3.11 for Workgroups using PC Task 4.3 emulator. ☎ 01922 693558.

USER GROUPS

User group ads will be printed for three issues.

New user group starting up in Bodmin, Newquay, St. Austell and Truro. ☎ Clive on 01726 822061 after 7.30pm on weekdays, any time on weekends.

XCAD users group want to attract as many XCAD users as possible. Interested in joining and receiving the "XCAD User" newsletter and tutorials? ☎ Tony 01662 250320 after 6pm.

Are you interested in helping other Amiga users? Are you stuck on a particular aspect of the Amiga (hardware or software)? If so, ☎ Terry 01709 814296 to join the free Amiga helpline.

Edinburgh Amiga Club. Meets every second Tuesday at Gilmerton Miners Welfare Club, 7pm – 11pm. Tutorials for beginners, information at all levels, hardware and software help. Email jim@eac.ednet.co.uk.

X Zone BBS, West Berkshire's coolest BBS with nearly 3,000 files online, pictures, MODs, HD installers, utils and more. ☎ 01635 820590 now (6pm to 1am, 33.6K BPS).

Maidenhead Computer Club. One of Berkshire's longest established clubs, new members welcome. Meet every second Thursday of the month, 7.45pm, Community Centre, Highfield Lane, Cox Green, Maidenhead. ☎ Alan Everett 0118 9453420.

Amiga enthusiasts wanted to join forces against Amiga-hating Channel 4 Teletext page, Digitiser. To join, send SAE to Kill Digitiser, 81 Doncaster Road, Selby, North Yorks, YO8 9BU.

East Lanc's Amiga Club. Free membership. We are willing to help you with any problems you have. ☎ Mark 01254 728115 or write to 70 Tintern Crescent, Blackburn, Lancs, BB1 5RY.

Coventry and Warwickshire Commodore Computer Club. Meet first Wednesday of every month at Earlsdon Methodist Church, Coventry, 8pm – 10pm. ☎ Will Light 01203 413511 or Ed Freeman 01788 812138. Email luke.stowe@ukonline.co.uk

Deal Amiga Club. Meet every Friday, 7pm – 11pm, St. Johns Ambulance Hall, Mill Hill, Deal. ☎ 01304 367992 / 379857 or email amiga.club@centrenet.co.uk.

New user group starting up for programmers. If you're interested in Basic, Amos, C or Java, ☎ Ross 01705 645311 (afternoons or evenings).

Online? Then visit my revamped site at http://www.shepherd.home.ml.org for loads of Amiga news, downloads, charts and Star Trek and football info. We need your input.

Kickstart, Surrey Amiga user group. Meets last Monday of month in Ottershaw, Surrey. All Amiga users welcome for fun, help and general Amiga usage, tutorials and Amiga surgery. ☎ Rob Gilbert 01932 562354 or email gilbia@arrakis.u-net.com.

Power Amiga – New Amiga group in Portsmouth, for Internet, video graphics, scanning, digitising, word processing, desktop publishing, animations, CD-ROM, games, support, etc. Monthly newsletter. ☎ Richard 01705 829541.

Amiga Design Workshop, UK. Anyone welcome. Monthly newsletter, run by readers, database, stored lists of animations, art, music, etc, which are sent to software houses/websites, competitions, resource panel which offers support and equipment. ☎ 01892 870483 (outside office hours) or write to: 2 Morden Cottages, Chiddingstone, Causeway, Tonbridge, TN11 8JB.

The Gallery

ON THIS MONTH'S CD

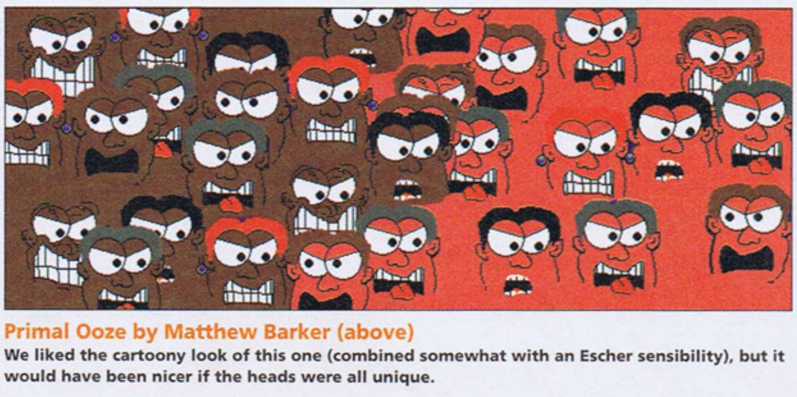
AFCD32:-ReaderStuff-/-Gallery-

As always, **Ben Vost** is stunned by the quality of the work in the Gallery. Maybe you can impress him more…





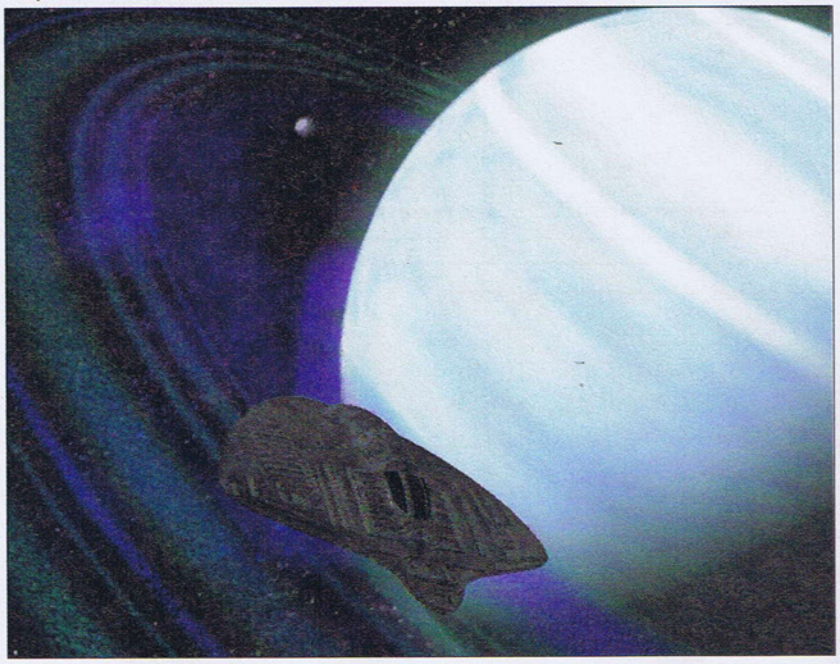
Magic Marker (above), Marker Launched (left) – both by Trevor Taylor
Trevor's animation, from which these frames are taken, is superb. His use of *Lightwave* to generate it is also very good, making good use of cinematic effects like cuts.

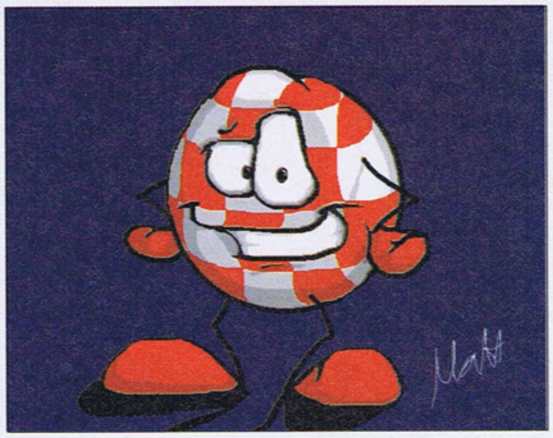


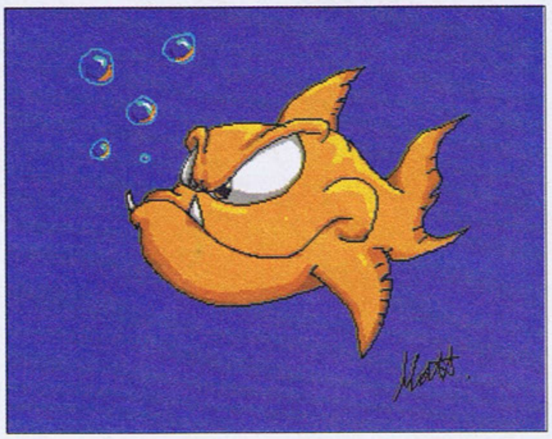
Primal Ooze by Matthew Barker (above)
We liked the cartoony look of this one (combined somewhat with an Escher sensibility), but it would have been nicer if the heads were all unique.



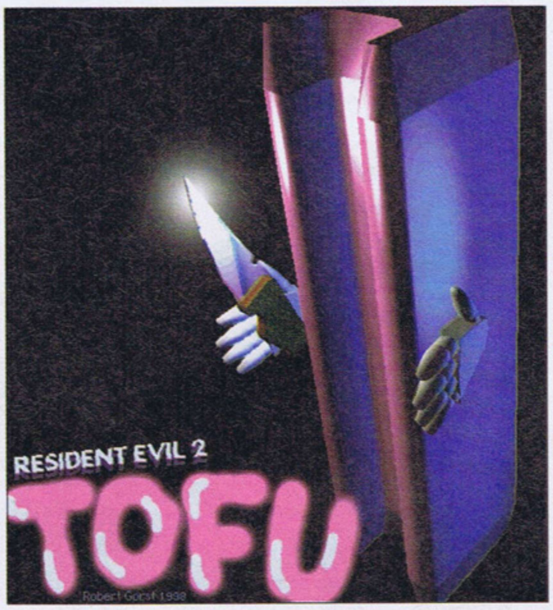
Geode by Chris Brown (above)
Chris doesn't have an enormously high-powered Amiga so it comes as no surprise that this render took 29 hours! It's perhaps more surprising that the quality of the composition is so high, even if the picture is somewhat clichéd.





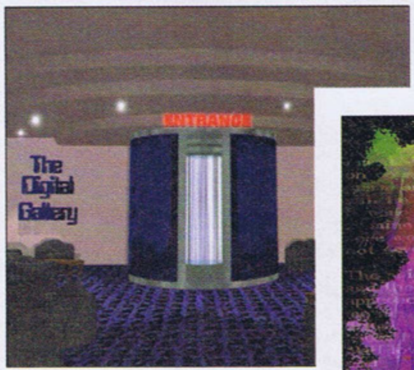


Boing (top), Fish (above) – by Matthew Hampton
Excellent cartoony work from Matthew here. Perhaps we have another Eric Schwartz on our hands?



Tofu by Rob Gorst (above)
We liked the composition of this image from Rob. The mixture of rendered and 'airbrushed' art works nicely.

Orbit (above), Foyer (left) – both by Steve Clark
Nice lighting in the Foyer picture and the backdrop in the Orbit image assured Steve of a place in this month's Gallery.





Wrong by Dimitris Katsofouros (right)
A regular contributor to the Gallery, Dimitris works in pencil first, then scans his pictures to colour them and add texture in Amiga art packages.

SUBMISSIONS

ON THIS MONTH'S CD

Send your Gallery artwork to AFCD Submissions, Amiga Format, 30 Monmouth Street, Bath, Somerset, BA1 2BW, or email them to afcdsubs@futurenet.co.uk. Please don't send any files over 1Mb in size. Also see the submissions advice file on the CD for further options.



Serious AMIGA FORMAT disk

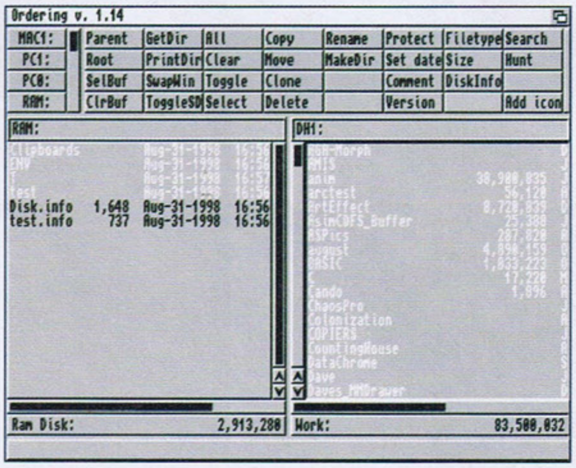


Mixing it up this month, **Dave Taylor** presents a wonderful cocktail of programs from file managers to music makers. Let's get into the groove…

Ordering

As Feargal Sharkey almost said, a good Shareware file manager these days is hard to find. However, *Ordering* has been continuously developed by its author to become one of the better offerings. It's now several versions since we last featured it and a lot of cleaning up has been done to it.

When you start *Ordering*, you'll see the split screen file manager that we're all used to. Along the top are banks of buttons which offer the functions of the program and below there are two columns, one for a source and one for a destination file listing. On the top left of the main window is the list of drives available on your system. You can load a drive into each of the columns and simply double click on one to navigate through the directories.



The main *Ordering* package allows you to do all the main housekeeping tasks that you'd expect. Most of the actions are performed from the button banks at the top.

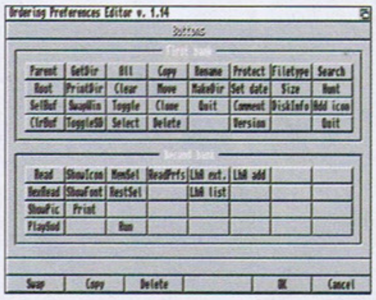
If you want to select a file or directory to operate on, you can just single click on it. If you want to select multiple entries in one go, you can draw a box around your selection using the mouse.

When you've selected an entry you can use any of the buttons along the top to perform the action on it. The default actions include all the normal housekeeping tasks you'll need, like copying, renaming, setting protection bits, sizing directories, searching for files or hunting for strings. At the very right of the buttons you'll see a long, thin column that may look inconsequential. This actually toggles the button bank between bank one and bank two. The two banks offer different features so you actually have more features than can be displayed on the screen at one time.

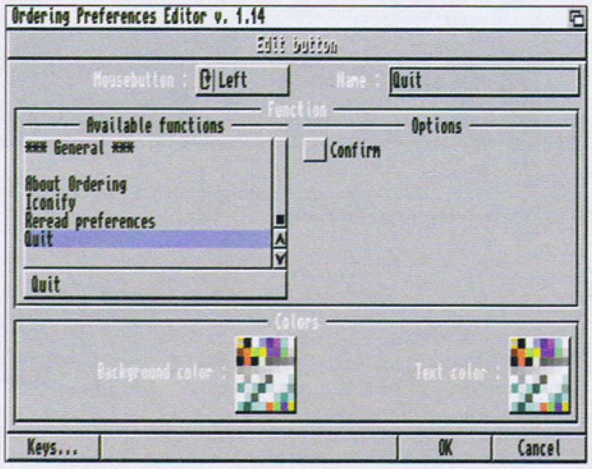
> The two banks offer different features so you actually have more features than can be displayed…

As well as the buttons, you'll also see a Disk menu in the program. This allows you to perform actions such as formatting and installing disks to make them bootable.

The real difference between *Ordering* and other Shareware offerings is the ability the user has to modify the program and its features. When you install the package you'll see that there are two program icons, one for the main program and one for the preferences (you should have already played with one part – see the Important Installation Information box).



The button banks can be changed in the *Preferences* program. Not only can you change the position of each button to suit you…



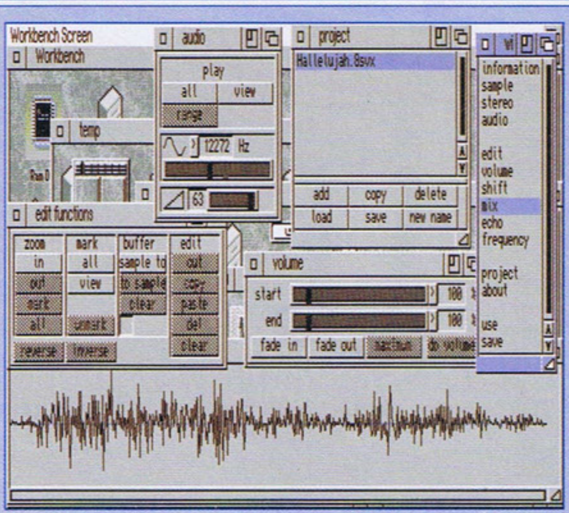
… but you can also change the actions that are performed by each button. The program can also handle right mouse button interaction.

IMPORTANT INSTALLATION INFORMATION

Before you start using the program, you must use the Installation routine. When you've done this, you must also open up the Preferences program before starting *Ordering*. In the preferences you can change lots of options but there are two that we recommend you change immediately as we found the program to be unstable if you don't. Go to the Options tab and click on the "Use ExAll()" option to check it. Then click on OK and click on Save to save the preferences. You can now load the main program.

If you find the program locks up on your system using this option then you can uncheck it, but on our test systems this was the most stable mode.

SAMPLE E



Sample E offers a wealth of options for editing sound samples. As you can see, it uses up a lot of the screen with its various windows.

Sample E **is a program dedicated to helping you edit and enhance your samples for use in other music-making packages. When you load** ***Sample E*** **you'll see that it's split into a set of windows. Each window looks after a different part of the operation but you need to find the Project window first so you can load in a sample. Simply click on Load and choose a sample – you'll need to have some of your own as there aren't any included.**

When you've got a sample loaded, the wave will be displayed in the Sample window and you can now edit parts of it by wanding in a selection.

The program can change frequencies, cut, merge, change samples rates and convert the FileTypes.

If you start to get swamped by all the windows on the screen then you can close some down. They're easily re-opened by double clicking their entry in the Windows list.

PREFERENCE POWER

The preferences are split into sections and then again into different pages within the sections. The first part deals with the button banks. When you open this section you'll see the two banks that are available in the program.

You can move the buttons around by toggling on the Swap button at the bottom and choosing which buttons you want to interchange. If you aren't in the Swap mode you can simply left click on a button and go to the button option screen. Each button has a different action associated with it and it's here that the association is defined.

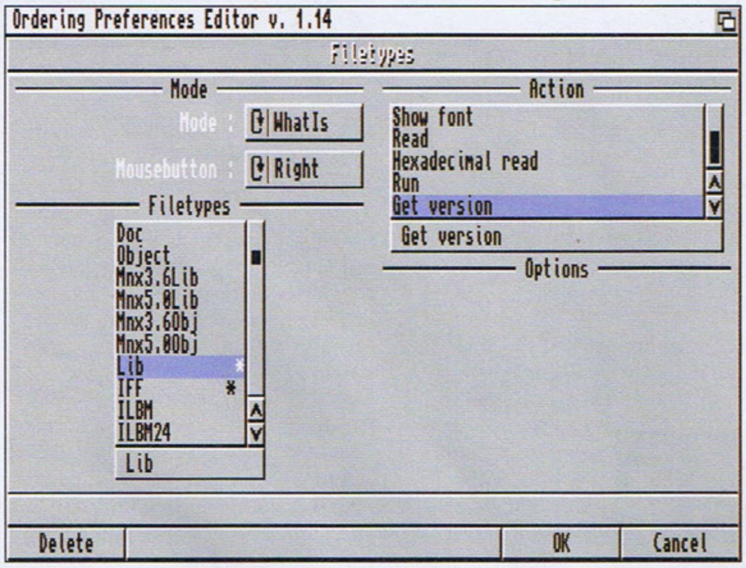
If you just want to add a function, select one of the empty buttons and click on it. In the options type in a name for the button – this is the text that will be displayed in the button bank. Then select one of the functions from the scrollable list on the left.

If the action has options attached then you can choose which ones should be enforced. For example, if you add a Quit button to the bank, you can decide whether the action will require confirmation or not.

The next section down is Paths and this allows you to choose which paths should be displayed in the drive listing in the top left of the screen for quick access. The Menus section is next, and this works in a similar way to buttons, allowing you to add in Menus and items with the same internal functions.

FileTypes is probably the most important section as it allows you to choose what the program should do with a file when you double click on it. As with buttons, you can also define whether a right click should activate it. There are two other buttons for general and screen options which should be fairly easy for you to get to grips with.

When you've set your preferences you must make sure you save them before exiting. You'll need to re-start *Ordering* in order to see the changes you've made take effect.



One of the most important parts of the *Preferences* program is the FileTypes section which allows you to define how the program should handle individual FileTypes when you double click on one.

OTHER UTILITIES

PRINT MANAGER

This is a remarkably useful program. When loaded, it sits and waits for any files sent to the printer. It intercepts them and then deals with them itself. What's the use of this? Well, instead of freezing your program while data is spooled to the printer, ***Print Manager*** **takes all the data so it can spool it, thus freeing up your application.**

If you send another file to the printer while the manager is still printing one out, it is queued. The added bonus is that if you register, the full package has an enhanced parallel device that speeds up printing. A preferences program allows you to choose some of the ways in which the program works with your system.

MEMWATCH

This is a small, simple utility which displays a memory meter for you on Workbench. There are ToolTypes set in the program's icon and listed in the documentation that allow you to change the information and the way it is displayed.

DISKBUSY

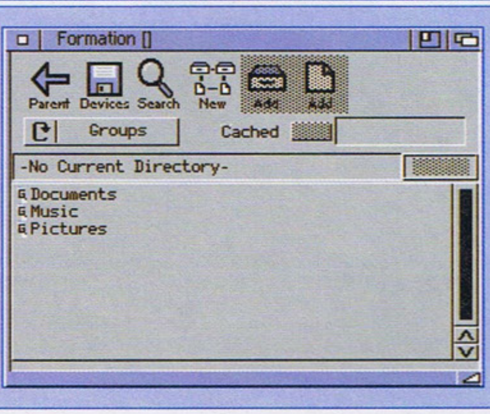
Another small utility, this one is really designed for people whose disk busy lights are either hidden away under a stand or even altogether inside a new case. This simply puts a duplicate display up on Workbench which shows when the disk drive is in use.

AKPREFS

If you have some of the AK datatypes installed on your system, this new preferences program will allow you to adjust their parameters. For example, you can choose what sort of dithering to use with JPEGs or whether to include GIF transparency.

FORMATION

Ordering **isn't the only file manager included this month. We've also got the latest version of** ***Formation,*** **the package that allows you to group together files stored in diverse directories without moving them. When you start the program you'll need to click on New Group to start your new collection. You can have multiple groups and each group can contains directories and individual files. Like** ***Ordering,*** **the program will also check the FileType and try to execute the correct action when you click on one of the files that has been added to a group.**



Formation allows you to group together files and directories from different places to keep similar projects together, without actually moving files.

Games disk





AMIGA FORMAT

Dave Taylor gets inside a girl's dreams, a frightening thought, and fights to guide her through the nightmares to the land of happy bye-byes.

Pati's Quest
Sweet Dreams

You don't often see a heroine take the lead in computer games (except for the dubiously-clothed, high-kicking, street-fighting ones) so it's refreshing to see a new character. She's a girl named Pati whose dreams are being invaded, but she's not taking it lying down.

To run the game you need an A1200 or above (if you have problems running the game, see the Running Instructions box). When the game starts you'll see a few intro pieces and you can press fire on the joystick to skip to the Start menu.

This menu allows you to change the options if you want to. You can change the sound or difficulty if you feel the need. When you're ready, press Start and Pati will go to bed and go to sleep.

When she's dropped off you start the game. This demo has the full first adventure, containing five levels. The full game has four adventures, each with five levels.

> "... work out where they walk to before they turn around and then follow them, hitting them in the back."

Pati is controlled by the joystick and you can move left and right as per usual. Up will make Pati jump and you can control her slightly in the air by using the directional controls. If you pull down on the joystick you can make Pati crouch and then you can make her crawl left and right by keeping the joystick down and moving left and right.

Finally, Pati has a weapon. As you see her standing there, you'll see she's sucking a lollipop. As luck would have it (hey, this is a dream), she has an inexhaustible supply of lollies. When you press fire she'll throw one.



Is a good night's sleep really too much to ask for?

THE BAD GUYS

Of course, there's a veritable army of nasties out there trying to stop Pati from getting a good night's rest. The green slugs that slide along don't hurt Pati too much and are easy to kill. Note how the lollies fall as you throw them – you don't have a great range. You can increase the range by jumping as you throw them



Shoot that critter before it bumps into you!



Certain power ups allow you to jump up to great heights.

DYNAMITE BALL

As well as Pati, this month's Games Disk has an extra game. *Dynamite Ball* is extremely simple to play. When you start it you can choose from three levels, each with a different theme. All you have to do is guide the rolling ball past all the falling enemies. Sounds easy? To start with it is, but as you progress and you score more, the enemies start to come faster and more often and you get more than one on the screen at once.

You control the Dynamite Ball with the joystick and you can move it up and down as well as left and right, so you can manoeuvre around the oncoming enemies. You don't have the full width of the screen to play with though, only the middle area. Good luck!

because this gives a better trajectory. There are also tumbleweeds that roll around, which are stronger, green monsters that stomp along and are quite powerful and birds that protect items in the sky. Not all of these can be killed by just one hit.

The best strategy is to watch the enemies on the screen. They all follow a set path and don't deviate from it, so you only actually get hit if you let them walk into you; they won't chase you. Of course, sometimes you'll get stuck, say if you mis-time a jump. However, the best strategy is to work out where they walk to before they turn around and then follow them, hitting them in the back. Hey, I never said it was chivalrous.

GETTING STARTED

When the game starts, the usual urge is to try exploring to the right. However, with Pati it's best to take a look to the left first. If you jump over the cave entrance you can check out the extra bit over on the left and it's worth it. The screen scrolls as you walk and you'll get to the far left where there's a set of platforms too far off the ground for you to jump to. Above the platforms is a set of items.

Pati collects items as she moves over them. These mainly just give you points, but there's a set of red jewels like the ones you can see over the platforms. You need to collect all of the jewels on the level to complete it.

At the bottom of the screen you'll see a status bar that shows Pati's health on the left. The number of lives remaining is shown by Pati's head. When she loses a life she'll wake up and then get back to sleep, but when you run out of lives she'll fall out of bed and not be able to get back to sleep.

To the right is the health bar which shows how much more damage Pati can take, denoted by a set of lollipops. As she gets hit, the lolly on the right will dim and go out. This continues until all the lollies have gone. Next to this is a weapon indicator which shows whether Pati has picked up any power ups.

In the middle you'll see the jewel counter. This shows how many jewels are left for you to pick up on the level. Then there are other icons for any special items collected and for your score.

SEEING STARS

Back to the game, then. To get to the platforms you need to look for a set of flashing stars. They don't stand out unless you're looking for them and they denote a hidden platform. If Pati jumps onto it, a stone step will appear under her and she can use this to make the jump up to higher levels.

Look for this in different places through the game as it's the way to get past seemingly impossible jumps. The stars only flicker when you're near them, so you might have to explore thoroughly.

On the very left of the screen you'll be able to make a jump onto another



Sometimes, crawling is your only option.

hidden step and from there make an arc jump that collects some red jewels and a blue lollipop. This gives you a weapon with more range, but it's not infinite.

If you go back to the place where you started you can drop down into the cave; the drop won't hurt. Note how there are some steps that come in and out of the rock face. You can use these to get back out again by jumping on them when they're extended. However, the idea extends further than this as you'll see as you explore the caves.

There are traps that look a little like fists which also pop in and out of the rock. You need to judge this right so you don't get caught by one – they hurt.

Deep in the caves you'll also come across a part that Pati can't walk through and this is where crawling comes in.

All of this should get you used to the different types of features in the game, but it doesn't cover the first level fully. The level is large and this is just one portion of it. You can play the rest of it for yourself and then go exploring the other four levels from this adventure. For details on the full game, see the documentation on the disk. AF

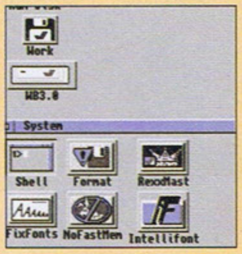
RUNNING INSTRUCTIONS

Pati requires 2Mb chip RAM to run. If you can't get it to run when you've installed it because of low memory, re-boot your Amiga and start it with no startup-sequence. (Hold down both mouse buttons as you reset and choose it from the menu that appears.)

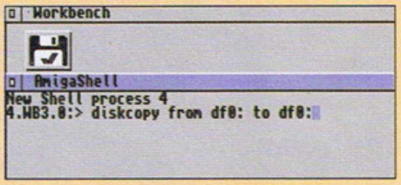
When a Shell appears, change to the directory you installed to by using the "cd" command. For example, cd "dh1:games/pati demo" <return>. Note the use of the quotation marks because of the space in the directory name. Then type "pati" and press <return>.

BACKING UP YOUR COVERDISK

Copying your Coverdisk is really very simple. Just follow the stages below...

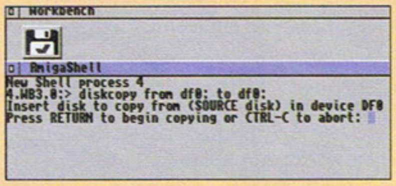


1 Boot up with your Workbench disk and find the Shell icon, in your system drawer. Double-click on this to go into the Shell.

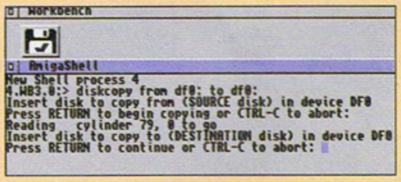


2 Type in the following line (with a zero, not the letter O), taking care to put the spaces in the correct places:

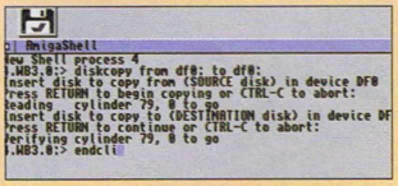
DISKCOPY FROM DF0: TO DF0:



3 When asked for the Source disk, insert your write-protected Coverdisk and press Return. All of the info on this disk will then be copied from the disk into memory.



4 Once your Amiga has read the info, it will ask for the Destination disk. Insert it and press Return. All information on this disk will be destroyed.



5 On an unexpanded machine, the Amiga may ask for the source disk again, because it copies in chunks. Finally, type endcli to close down the Shell.

DISK NOT WORKING?

We take every care to test the Coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:

Amiga Format (insert name of disk)
TIB PLC • TIB House
11 Edward Street
Bradford • BD4 7BH

If there is a manufacturing error then the stamps will be returned with a replacement disk.

* **New DataTypes** * WCP (GlowIcons) * * **New**

Coverdisc

AMIGA FORMAT





Welcome to another instalment in the world's best CD saga, and we're not talking about holidays for the over fifties here! Ben Vost, as ever, is your tour guide.

NAPALM!

-ScreenPlay-/-Commercial-/NapalmDemo_v1.0

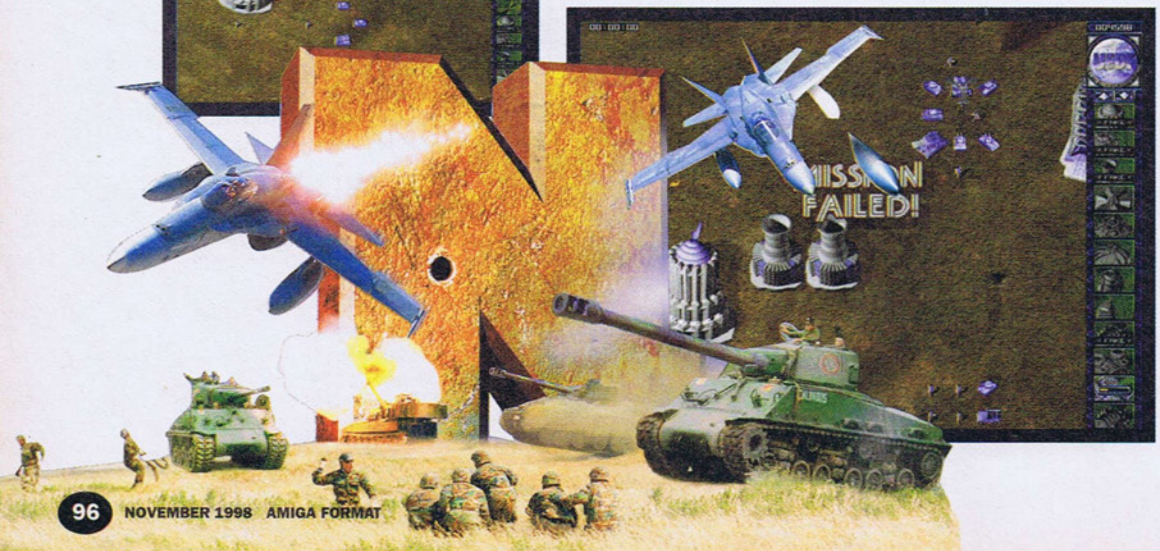
We were the first to cover it and now you can play clickBOOM's excellent new game here on the *AFCD*. You may need to install *RTGMaster* and *AHI* (both of which can be found in the +System+/tools drawer on the disc).

You'll also need to update the libraries with the PrepareLibs script in the *Napalm* drawer, but you should be ready to rock and roll then. If you have a graphics card you can go for a resolution of 640x480, but AGA users should probably stick to 320x240. Either way, you'll be plunged into the best real-time strategy game to grace the Amiga for a looong time.

However, this demo's pretty much impossible to win as it stands. If you really want the chance to beat the baddies, you'll need to pre-order the game with clickBOOM who'll give you a code so you can extend the amount of time you get on the demo, with more money and more reinforcements.

You can find clickBOOM's website on our CD, although by the time you read this there'll have been an update to the "live" version that incorporates the *Napalm* part of the site.





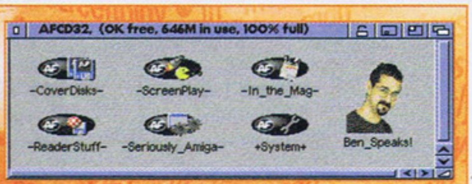
Have a go at the game that's wowing them all, but make sure you have enough memory before you start – you need 16Mb fast RAM!



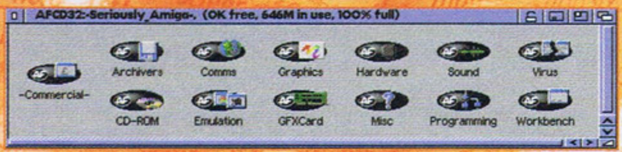
If your Amiga doesn't have the horsepower, you can still run *Napalm* in Low Res.

NEW THINGS TO SEE

Those of you who use *NewIcons* will notice a startling difference in this month's *AFCD*. We've gone *NewIcon*-mad for the first time, with new icons for many of the drawers, projects and files that we have on our CD. Our gratitude goes to Robert Miller who not only drew some great icons but also adhered to our stipulation that they should be the same size as the existing *MagicWB* icons to make snapshotting easier.



Luvverly *NewIcons* for the users among you that like 'em.



AFCDFind has also been updated this issue to make it integrate further with *Directory Opus*. Oliver Roberts has managed to allow the user to use all of *DOpus*' FileTypes for different files instead of relying on *AFCDView* for everything. This may help with filetypes that can't be defined in *AFCDPrefs* yet. Also in line with our aim of deeper integration with *DOpus*, we've included *Dread*, *Dshow* and *Dplay* that you can use in *AFCDPrefs* for reading, showing and playing files. This passes the file in question to *Directory Opus* for interrogation by that program's FileTyper.

Ben_Speaks! is also undergoing some changes. I know you don't want to hear me harp on about my favourite topics every month so I've decided to open out the "Thought for the Month" page to anyone who wants it. This month, appropriately enough, I've given it to ex-deputy editor of *CU Amiga*, Andrew Korn, to say what he wants. If you'd like a go, just send me some text on a topic that you feel strongly about (you don't need to do the HTML; that's what I'm here for) and a picture of yourself to go with it. If you've got email then send it to ben.vost@futurenet.co.uk with the subject "Thought for the Month". If you haven't, just send me a disk with your thoughts on it in plain ASCII text – I can't guarantee to have the same word processor as you. Anyway, the best of the entries will go on the CD as the thought for the month, and you can expect to see a few Amiga "celebrity" thoughts as well.

Last up for news this month is a fresh selection of websites. The one thing that people normally complain about being stale on our CD is the website section, but there should be enough to keep everyone happy this month.

Be aware that some features will only work if you are online, like HiSoft's shopping basket, and that Squid's Rumor Mill isn't averse to slightly off-colour language that you may be offended by.

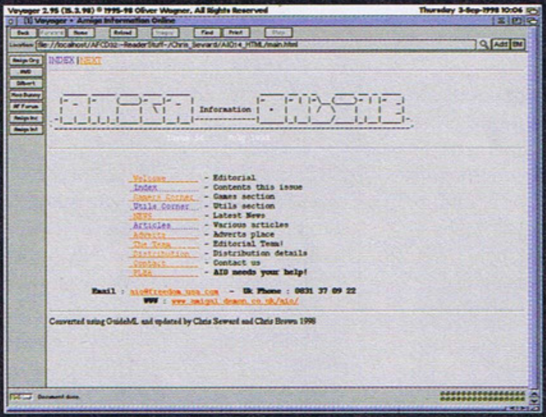
MAME * After the Fall TC for Quake * **New SWOSEd** * New Virus Checker II * **New SoundFX** *

Your Stuff!

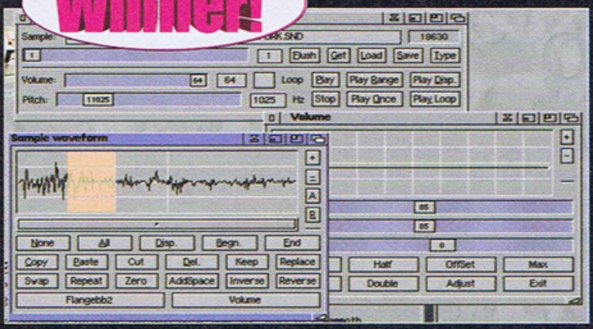
There are ten drawers for you to sift through this month, including Gus Haines' (you may know him better by his IRC nick DrJekyll) website for Amiga Awards. Chris Seward graces us with a variety of stuff, including his WBF1 Formula One car for Workbench, and scripts for insulting people on IRC. He's also the editor of *AIO*, the disk mag we did a news story on last issue, and you can read the latest edition here on the CD.

Bernard Cain keeps going with his *Business Card Maker*, Severn Dickinson gives us some *Worms* levels and Craig Daines has his *UFO* diskmag and some Gillian Anderson backdrops for us. However, the winner of the Reader Prize this month has to go to Matthew Hampton for his excellent sample editor called *SamEd*.

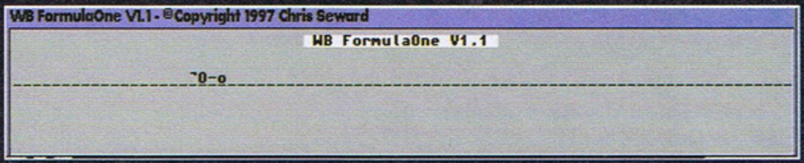
£50 AF Winner!

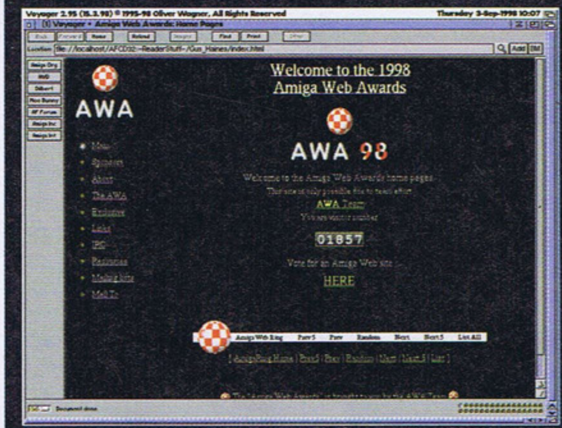


Some varied entries this month, but...



... only one can win.





WORKBENCH GAMES

-ScreenPlay-/Shareware/yahzee
-ScreenPlay-/Shareware/MiniArcanoid
-ScreenPlay-/Shareware/MUIMastermind

Okay, so they aren't the most imaginative games around, but the fact that you can play them on your WB screen has to count for something.

The pick of the bunch has to be *MiniArcanoid*, since *MUIMastermind* has a lousy interface and *Yahzee* is just too… well, I suppose it depends on how much you like dice games.

MAKECD DEMO

-Seriously_Amiga-/-Commercial-/MakeCD_3.2a

It seems that we regularly have the *MakeCD* program on our coverdisc, and it's true. This is mainly because of the fact that the authors, Patrick Ohly and Angela Schmidt, are such groovy programmers. They're always adding new hardware drivers and features to what must be the most fully-formed CD writing package around for the Amiga.

This new version adds support for even more CD-R/RW drives and fixes some of the small bugs that were found in the original 3.2 release.

ART EFFECT DEMO

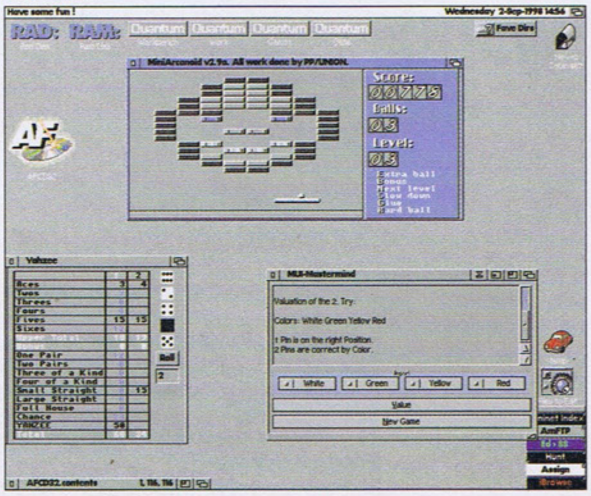
-Seriously_Amiga-/-Commercial-/ArtEffect26.Demo

Art Effect is rapidly becoming the Amiga's top serious art package. You can check out for yourself how it compares to offerings on other platforms that *Art Effect* is so often compared to, such as *Photoshop*, here on our CD.

Unlike existing paint packages like *Personal Paint*, *Art Effect* takes the approach that anything and everything can be approximated.

Image too big for your screen? Never mind, just work on it at a reduced size. No true-colour display on your Amiga? Don't worry, *Art Effect* will get the best picture from your Amiga for you to work with. In addition to this handy facility, *Art Effect* also has a wide range of plug ins that allow you to apply various effects to your images as you work. There's loads to see and do in this demo so what are you waiting for?

Workbench games – fun while you do other stuff.



STFAX PATCHES

-Seriously_Amiga-/-Commercial-/STFax

STFax is a troublesome application. Because of the so-called "standards" that exist in the modem world, it means that it's very hard to please everyone all the time. However, thanks to constant updates, *STFax* is nearing that paragon and it continues to improve as time goes by.

IMAGEFX PATCH

-Seriously_Amiga-/-Commercial-/ImageFX32_Patch

Like *Art Effect*, *ImageFX* takes the approximation approach. However, it's been doing it for a lot longer than *Art Effect* and has a much more "Amiga" way of doing things. This patch is for any version of *ImageFX* from v3.0 upwards, and patches it to the current version 3.2. This clears up some of the bugs that plagued the early release of the software.

PAKMAN BYTES BACK

-ScreenPlay-/OtherStuff/PakMan

The *Quake* bandwagon rolls on. Not only

Continued overleaf ➡

At your fingertips

MIAMI

-Seriously_Amiga-/Comms/Other/Miami30d

We've got this update to the latest version of the well-known TCP stack on our CD this month. Even if you're already running it, you may have missed this update because they aren't generally available on Aminet.

DATATYPES

-Seriously_Amiga-/Workbench/-DataTypes-

As usual, we have the very latest DataTypes on our CD. Available this month are DataTypes for jpeg, lossless jpeg, PNG, *Superview*, *PhotoCD*, RGFX (a replacement for IFF ILBM) and *ProTracker*. There's also an experimental PDF DataType and a replacement ILBM datatype.

SHMOOOVE!

-Seriously_Amiga-/Workbench/smooth!

Anti-aliased Workbench fonts sound like a great idea to us, especially since a lot of people now have powerful enough hardware to offer them. So does Frank Bastian, which is why he's created this patch.

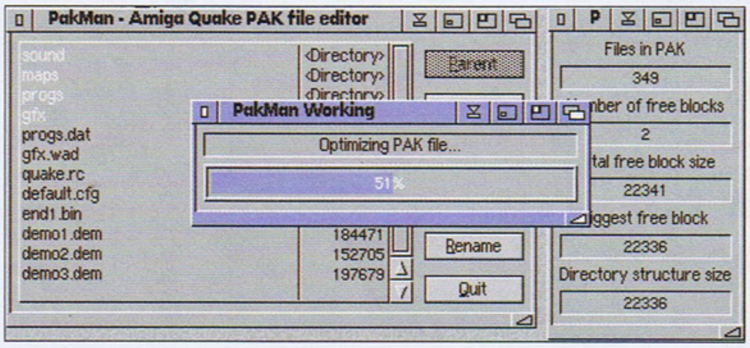
It's still at an early stage of development, but so many people were pestering him for it that he's decided to release it publicly. It needs a high- or true-colour screen, so those of you hoping for anti-aliased fonts on your eight-colour screens will be disappointed.

THE WORLD'S GREATEST GAME?

-ScreenPlay-/Shareware/Y3000

Just check it out and see what you think.

← do we have the start of a mammoth selection of *Quake* total conversions, deathmatch levels and more on this CD, we also have an increasing number of tools for *Quake*. The first of these is the appropriately named *Pakman* which can optimise *Quake*'s PAK files or even allow you to create your own for others to play.



Optimising PAK files should mean they load faster and take up less space on your hard drive. Even the default PAKs can be improved.

READER REQUESTS

-In_the_Mag-/Reader_Requests

The usual mix of stuff that you've asked for this month. As usual, there's the Aminet Index file, plus we have plenty of other things, from *AmFTP* to the xprClock.library, just as you asked. Remember, you can find out how to ask for stuff in the AFDocs file in the Reader Requests drawer.

BUILD A NEW FOUNDATION

-ScreenPlay-/-Commercial-/FoundationUpd

Foundation is one of those games that needed to be more thoroughly play-tested before it was released, but that's kind of irrelevant since Paul Burkey has done such a fine job of updating the game's engine and such like in the time since it was first released. You'll find update 15 on this month's CD. It's is a simple replacement for the main executables in the game, so you can simply copy them over your originals.

INSTALL IT!

-ScreenPlay-/HD_Installers

We've got a nice mix of HD installers again for you this CD, including, bizarrely, some installers for demos. Well, demo really. There's an installer for that old fave *Big Time Sensuality*, along with an eclectic selection of ones for *Paperboy*, *Thomas the Tank Engine*, *Beneath a Steel Sky* and more.

DISCLAIMER

This *AFCD* has been thoroughly scanned and tested at all stages of production. We recommend that you always run a virus checker on ANY software before running it. Future Publishing Limited cannot accept any responsibility for disruption, damage and/or loss to your data or your computer system which may occur while using this disc, the programs or the data on it. Ensure that you have up-to-date backups of data contained on your hard drives before running any new software. If you do not accept these conditions, do not use this disc.

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If your *AFCD* is defective, please return it to the address below. Please make sure that you have followed our installation procedures correctly to ensure that there is no physical problem. Please send us the *AFCD* along with a description of the fault (not forgetting your name and address). A new working version should be returned to you within 28 days. The return address for faulty discs is:

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Your *AFCD* should only need replacing if the CD itself cannot be read. If, instead, you are experiencing problems with an individual application, phone our technical support line.

This is open between the hours of 2pm and 5pm every Tuesday.

Tel: 01225 442244 Fax: 01225 732341

Email: amformat@futurenet.co.uk

(Please remember to put "Coverdisc" in the subject line.)

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies, Zip disks or CDs (we do take other media formats too). If you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer. We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Ben_Speaks!, or in the ReaderStuff or +System+/Info drawers).

Your signature: ....

Files you send in this month will probably appear on *AFCD34 – Amiga Format* issue 118, Christmas.

Please tell us:

Your name: ....

Your address: ....

....

Your postcode: ....

A contact number or email address: ....

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(2) the material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
(3) that there are no legal claims against the material provided;
(4) that I have full power and authority to provide this material to Future Publishing.

AF 116 – N0V 1998

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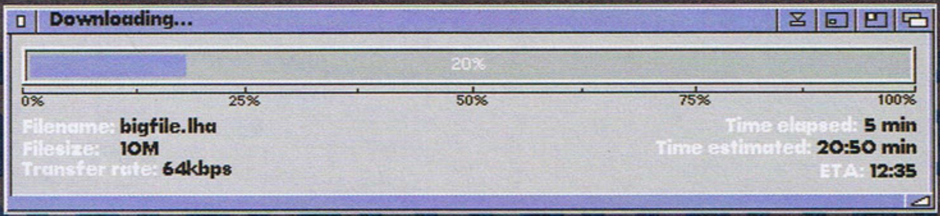
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If you have a feature idea, a long term test, a reader request or you want to be in the Amiga Angels list, send an email to benvost@futurenet.co.uk, with "Features", "Reader Review", "Reader Request" or "Amiga Angels" in the subject line accordingly. If you don't have email, a letter to the *Amiga Format* address with the same subject headings is also fine.

If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm, 2pm–5pm only). We're sorry, but we can't give games tips over the phone.

Next **Month**



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Amiga Format
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POWER MOVIE

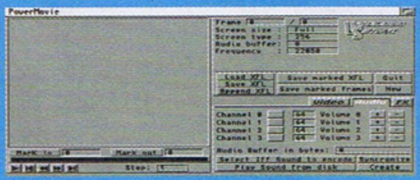
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Power Computing is in the process of licensing PowerMovie according to its final use in order to keep its price down. Amiga enthusiasts will be able to buy the software with a cheaper licence for personal, strictly non-commercial use. Commercial usage requires a business licence for companies planning to use the software and the files it creates for commercial products i.e. video games, Multimedia, Info-Points, etc.



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Oliver Roberts, of F1GP Editor's fame, is the author of the Power DC, the software for Power's Digital cameras.

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- Real Time Video in Black & White (NTSC)
- Shutter Speed: 1/60 to 1/16000
- Focus Range: 10cm to infinity
- Power Supply: 4 A4 1.5V batteries or DC Power adaptor

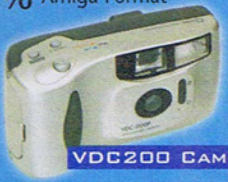
VDC-200 Technical Specifications

- Image/Video: 470,000 pixel CCD 24-bit col
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- 45mm Colour TFT LCD monitor
- Memory: 2MB, stores up to 50 images (standard mode)
- Compact flash memory slot
- Built-in flash
- Real Time Video in colour (Pal)
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VDC100 CAMERA

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VDC200 Camera	**£199.95**
2MB Flash RAM (VDC200)	**£49.95**
4MB Flash RAM (VDC200)	**£TBA**
50 Alkaline Batteries	**£25.95**

New software v1.2, existing owners send SAE for free upgrade!

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http://www.powerc.com sales@powerc.demon.co.uk

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Power Tower 1

- Includes 200 watt PSU
- PC Keyboard
- PC Keyboard Interface
- Floppy Drive facia/floppy cable
- All screws, port labels and leads

Power Tower 1 . . . . . .£129.95

Power Tower 2

- Power Tower and keyboard
- A1200 main board
- 1230 33MHz, 8MB RAM, 33MHz FPU accelerator card
- Floppy disk drive
- 3.1 Workbench
- 3.1 Manuals
- Wordworth 4.5SE
- Turbocalc 3.5 Spreadsheet
- Datastore 1.1 Database
- Photogenic 1.2SE
- Personal Paint 6.4/Organiser 1.1
- Pinball Mania/Wizz games

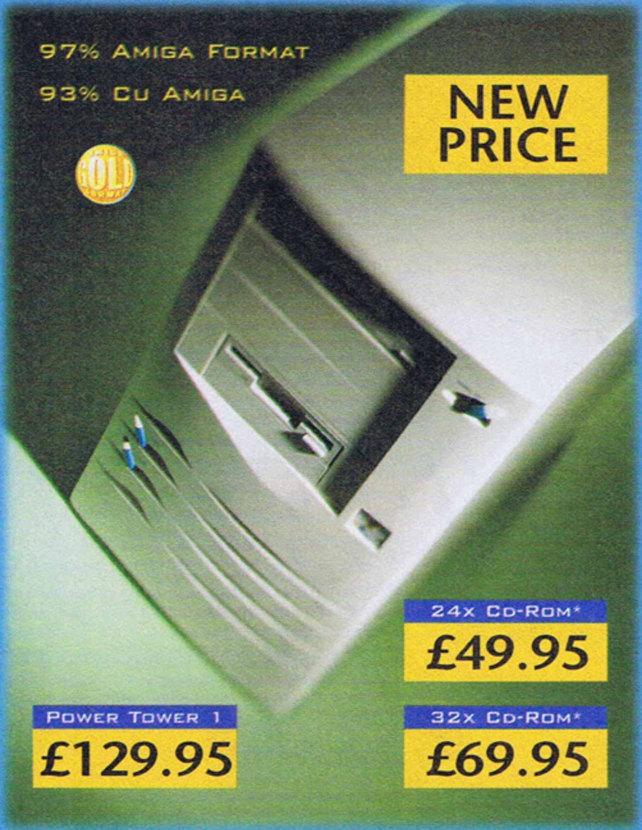
Power Tower 2 . . . . . .£399.95

Power Tower 3

- Power Tower and keyboard
- A1200 main board
- 1230 40MHz - 16MB RAM accelerator card
- 24x IDE CD-ROM
- 2.1GB hard drive
- 4 way IDE interface/IDE Fix 97
- Floppy disk drive
- 3.1 Workbench
- 3.1 Manuals
- Wordworth 4.5SE
- Turbocalc 3.5 Spreadsheet
- Datastore 1.1 Database
- Photogenic 1.2SE
- Personal Paint 6.4/Organiser 1.1
- Pinball Mania/Wizz games

Power Tower 3 . . . . . .£629.95

As above but with 1240 16MB RAM accelerator card add £149.95



*Bare CD-ROM drives for the Power Tower





New IDE Fix

- 4 Way IDE Buffered Interface
- IDE Fix 97 Software
- Fully Registered

Interface+IDE Fix £30.95
Interface+A4000 IDE Fix £25.95

IDE Cables

- 2.5" Cable
- 3.5" 3-Way 40-pin

IDE Cables £9.95



Panasonic LS120

- 120MB Floppy drive
- Cable, IDE Fix 97, 120MB disk
- 4 Way IDE buffered interface

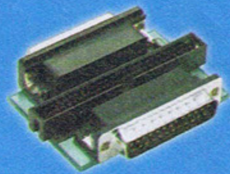
LS120 External £149.95
LS120 Internal £129.95
LS120 Internal no IDE . .£95.95
LS120 Disk £12.95



Iomega ZIP Drive

- Internal ZIP Drive
- Cable, IDE Fix 97
- Power Zip Tools
- 100MB Zip disk
- 4 Way IDE buffered interface

Internal Zip Drive £149.95
External Zip Drive £169.95



Int. SCSI Adaptor

- For the Power Tower
- Suitable for ext. connection
- Up to 7 devices internal
- Fits Viper Mk5 or any other SCSI device for int. connection

Int SCSI adaptor £19.95

Power Tower Accessories

Zorro (Please call for information) . . . .£CALL
Zorro III (Please call for information) . . . .£CALL
PCMCIA V adaptor (allows Squirrel to be fitted internally) . . £19.95
External audio port (for internal CD-ROM) £15.95
SCSI-I adaptor (internal 50-way pin header, ext. 25 way) . . .£19.95
SCSI-II (micro high density connector, int. 50-way header external micro HD connector) £25.95
SCSI-III (3-way ultra wide int. connector, ext. micro HD con) £45.95
SCSI-III (7-way connector) £69.95
SCSI-III Terminator £39.95
3-Way IDE ribbon cable (suitable for HD's, CD-ROM) £9.95
3-Way SCSI 50 pin header (for HD's, SCSI CD-ROM) £15.95
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25 Watt Speakers (inc. adaptor cable) £19.95
260 Watt Speakers (inc. adaptor cable) £49.95
200 Watt Subwoofer (inc. control box) £55.95







Amiga Magic Pack

- A1200 2MB 020 14.3MHz
- AGA Chipset
- Software

Amiga Magic Pack . . .£179.95

Amiga Bundle

- Amiga 1200 Magic Pack
- 4MB RAM Card included

Amiga Bundle £239.95

Hard Drives

- Inc. cable and software

3.5" 2.1GB £119.95
3.5" 3.2GB £149.95
3.5" 4.3GB £169.95
3.5" HD Stack Cable . . .£12.95

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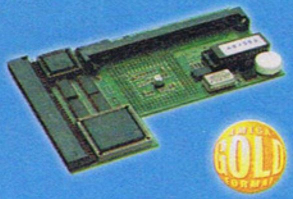
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http://www.powerc.com

Apollo 68030

- A2000 68030-50MHz
- Upto 64MB RAM
- FPU optional

Bare £169.95
Inc. FPU £199.95



Apollo 68040

- A1200 68040 Accelerator

Apollo 1240 25MHz . . .£129.95
Apollo 1240 40MHz . . .£189.95

Apollo 68060

- A1200 68060 Accelerator

Apollo 1260 50MHz £269.95
Apollo 1260 66MHz £319.95
66MHz is clocked up

Viper MK2

- A1200 68030 40MHz
- Full MMU

Viper MK2 Bare £79.95
Viper MK2 8MB £94.95
Viper MK2 16MB £104.95
Viper MK2 32MB £119.95
Viper MK2 64MB £199.95



Viper 520CD

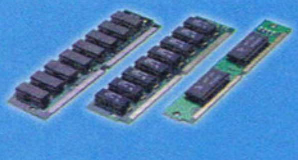
- A500 Accelerator Card
- 68020EC 33MHz without MMU
- PGA FPU Socket 33MHz Only
- Space for IDE 2.5" Hard Drive
- 2 x 40-Pin CD-ROM/HD Socket
- 8MB RAM On-board
- 3.0 ROM inc. software
- Fat Agnus slot to fit mini-chip

Viper 520CD £99.95



Memory Simms

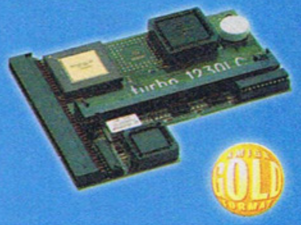
4MB 72-pin SIMM £9.95
8MB 72-pin SIMM £15.00
16MB 72-pin SIMM £25.00
32MB 72-pin SIMM £40.00
32MB Single side/Blizzard£89.95



1230 Turbo LC

- Not PCMCIA friendly
- IDE Buffered compatible
- 33MHz inc. 33MHz FPU
- Compatible with IDE CD-ROM

1230 Turbo 4MB £59.95
1230 Turbo 8MB £69.95



Blizzard 603e

- A1200 PowerPC Card
- 603e PowerPC with 68K CPU
- No SCSI, cannot be upgraded
- Up to 128MB RAM

160MHz with 68040/25 £249.95
160MHz with 68060/50 £469.95
200MHz with 68040/25 £299.95
200MHz with 68060/50 £539.95
240MHz with 68040/25 £359.95
240MHz with 68060/50 £609.95



Blizzard 603e+

- Same specs as above
- Includes DMA SCSI-2 interface

160MHz with 68040/25 £299.95
160MHz with 68060/50 £539.95
200MHz with 68040/25 £359.95
200MHz with 68060/50 £569.95
240MHz with 68040/25 £399.95
240MHz with 68060/50 £629.95

Special Offer

BVision PPC for
Blizzard 603e/e+
4MB SGRAM . . .£169.95

Cybervision PPC for
Cyberstorm PPC
8MB RAM £199.95

Cyberstorm PPC

- A3000/4000(T) PowerPC Card
- 604e PowerPC with 68K CPU
- Ultra wide SCSI-3, inc. FPU/MMU

200MHz with 68040/25 £619.95
200MHz with 68060/50 £779.95
233MHz with 68040/25 £629.95
233MHz with 68060/50 £839.95

Special Offer

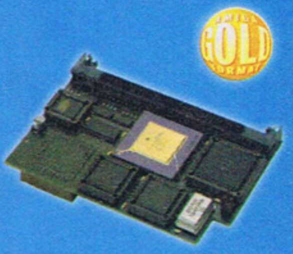
Special FPU prices when purchased with any accelerator card.

20MHZ (PLCC) £10
33MHZ (PLCC) £15
40MHZ (PGA) £20
50MHZ (PGA) £29

Viper 630

- A600 Accelerator Card
- 68030 33MHz Processor
- Up to 32MB RAM (1 x SIMM)
- FPU Included, PCMCIA friendly

A600 0MB 33MHz £75.95
A600 4MB 33MHz £85.95
A600 8MB 33MHz £95.95
A600 16MB 33MHz £115.95
A600 32MB 33MHz £150.95



Special Offer Flicker Fixers

Monitor Bundles



Internal Scanmagic for **£49.95** when you buy a 14", 15" or 17" Monitor. Scanmagic with internal flicker fixer **£79.95**

External Scanmagic

£99.95



AOC Monitors

- 3 year on-site warranty

14" Digital £99.95
15" Digital £129.95
17" Digital £249.95

Amiga Monitor

- Official 1084s inc. speakers

1084s Amiga Monitor . .£119.95
(Monitor not shown)



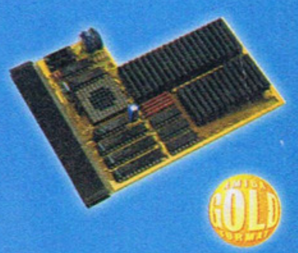
A1200 4MB RAM

- 4MB only not upgradable

A1200 4MB RAM £39.95
40MHZ FPU £15.00

A1200 0-8MB RAM

4MB RAM £45.95
8MB RAM £55.95
40MHZ FPU £15.00

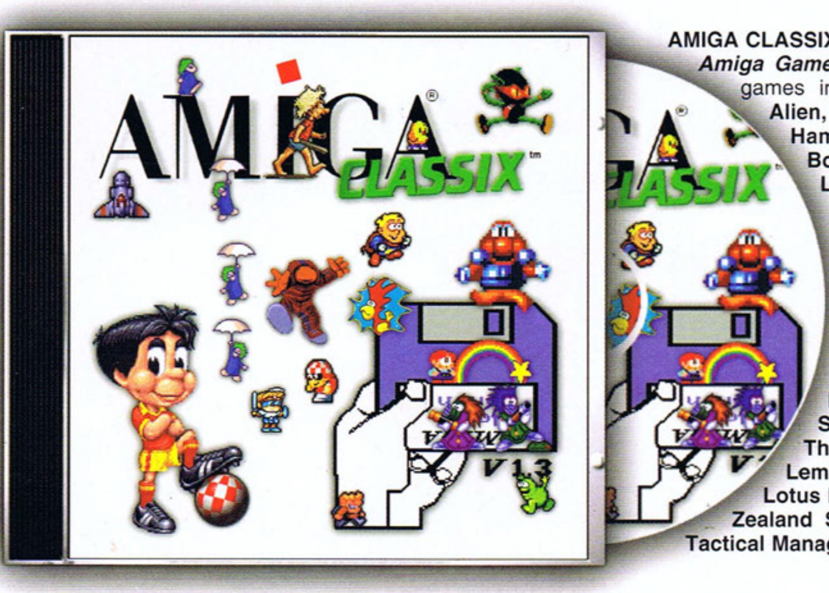


Ram Upgrades

CDTV 2MB RAM £49.95
A500 2MB RAM £49.95
A500 1MB CHIP RAM . . .£19.95
A600 1MB CHIP RAM . . .£24.95
1 MB Mini Mega Chip . . .£99.95

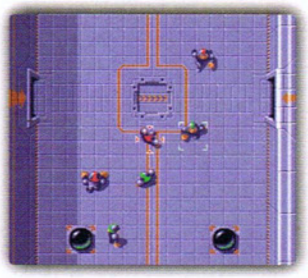
PHONE ORDERS We accept most major credit cards and are happy to help you with any queries. **CHEQUES/POSTAL ORDERS** Ordering by cheque/PO please make payable to POWER COMPUTING LTD and specify which delivery is required. **WARRANTY** All Power products come with a 12 month warranty unless otherwise specified. **TECHNICAL SUPPORT** Help is on hand with a full Technical Backup service which is provided for Power customers. **MAIL ORDER PRICES** All prices listed are for the month of publication only, call to confirm prices before ordering. **EXPORT ORDERS** Most items are available at Tax Free Prices to non-EC residents. Call to confirm prices. **BFPO** orders welcome. **MAIL ORDER TERMS** All prices include VAT. Specifications and prices are subject to change without notice. All trademarks are acknowledged. All orders in writing or by telephone will be accepted only subject to our terms and conditions of trade, copies of which are available on request. Please allow up to 7 days for cheques to clear before dispatching of the goods.

CD-ROMS



AMIGA CLASSIX is an original CD which features **over *400 Classic Amiga Games,*** many of which are **full** versions. Some of the games include **Amegas, Testament, Better Dead than Alien, Charlie J. Cool, Full House Poker, DNA, PP Hammer, Starblade, TechnoCop, Zero Gravity, Boondar, Blaster, Boston Bomb Club, Fruit Salad, Lex, Nemeses, Project Buzbar, North & South, Turn IT, Vietnam as well as versions of Alfred Chicken, Alien Breed 2, Apidya, Apocalypse, Star Dust, Armalyte, Armourgeddon, ATR, Beast Busters, Super Star Dust, Street Fighter2, Syndicate, Steel Sky, Benifactor, Body Blows, Breathless, Bubble & Squeek, Canon Fodder1&2, CoolSpot, Crash Test Dummies, Cyber Punks, Dark Seed, Deepcore, Detroit, Dragon Stone, Dream Web, Fears, First Samurai, Frontier Elite II, Globdule, Gods, Gulp!, The Hustler, Ishar3, K240, Kings Quest VI, Lemmings 2 along with classics like: The Lion King, Lotus III, Soccer Kid, Space Hulk, Minskies, Myth, New Zealand Story, Ruff'n'Tumble, Sensible Golf, Slam Tilt, Tactical Manager, Theme Park, Turrican 3 and more...**








After the HUGE sucess of the original Arcade Classics CD and the Arcade Classics Plus CD we have now excelled ourselves with the release of **ARCADE CLASSIX MKII**, this innovative duel format CD includes **over 1,000 variations** of all time classic games such as: **Asteriods, Battlezone, Bomberman, Bombjack, Boulderdash, Breakout, Centipede, Choplifter, Combat, Donkey Kong, Defender, Dig Dug, Dogfight, Frogger, Galaxians, Hunchback, Space Invaders, Joust, Jumpman, Loadrunner, Mario Clones, Missile Command, Moon Patrol, Mr Do!, Pacman, Popeye, Pengo, Pong, Q-Bert, Quix, Robots, Scramble, Space Wars, Super Sprint, TanX, Tempest, Tetris, Thrust, Trail Blazer, Tron, Uridium, Xevious, Snakes, Beserk, Mutant Camels, Gorf!, Llamatron, River Raid, Elevator, Blagger, Paradroid, Zelda, Dodg'ems, Aztec Challenge, Bagitman, Frantic Freddie, Decathlon, LCD Games, Zaxxon, Original C64 Convertions, and a wealth of other superb retro games.**



